					Mutations	Annotations
HACNE40	HACNE40R	990	229 - 426	3165		H0616: 3, L0665: 3, L0794: 2, L0639: 2, L0779: 2, H0423: 2, H0171: 1, H0685: 1, H0675: 1, S0408: 1, H0013: 1, L0105: 1, H0581: 1, T0110: 1, S0214: 1, H0622: 1, H0561: 1, S0002: 1, H0529: 1, L0762: 1, L0667: 1, L0766: 1, L0805: 1, L0655: 1, L0658: 1, L0790: 1, H0702: 1, H0648: 1, H0521: 1, L0748: 1, L0777: 1, L0758: 1 and L0366: 1.
HACNF21	HACNF21R	991	3 - 542	3166	Asp-30 to Thr-37, Lys-81 to Glu-87.	
HACNF41	HACNF41R	992	2 - 91	3167	Ile-13 to Gly-18.	
HACNI47	HACNI47R	993	39 - 500	3168	Val-23 to Lys-30, Tyr-40 to Asn-50, Lys-63 to Lys-68, Leu-92 to Asn-102.	
HACNI86	HACNI86R	994	239 - 370	3169		AR089: 18, AR060: 15, AR104: 14, AR096: 6, AR055: 9, AR061: L0754: 12, L0740: 8, L0731: 8, S0003: 6, L0649: 6, H0620: 5, S0214: 5, L0766: 5,

L0803: 5, L0805: 5,
H0545: 4, L0748: 4,
H0341: 3, S0444: 3,
H0486: 3, H0012: 3,
H0644: 3, H0551: 3,
L0662: 3, L0653: 3,
L0663: 3, S0126: 3,
S0206: 3, L0779: 3,
L0757: 3, L0758: 3,
H0294: 2, S0212: 2,
S0376: 2, S0360: 2,
S0410: 2, H0580: 2,
H0632: 2, H0156: 2,
L0105: 2, L0471: 2,
H0494: 2, H0647: 2,
S0002: 2, L0646: 2,
L0771: 2, L0794: 2,
L0776: 2, L0807: 2,
L0438: 2, H0547: 2,
H0672: 2, S0330: 2,
H0626: 2, S3014: 2,
L0750: 2, L0752: 2,
L0759: 2, S0026: 2,
H0624: 1, H0686: 1,
H0685: 1, H0713: 1,
H0717: 1, S0116: 1,
H0664: 1, H0638: 1,
S0418: 1, S0420: 1,
L0005: 1, S0356: 1,
S0358: 1, S0476: 1,

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S0222: 1, H0586: 1,
H0574: 1, T0039: 1,
H0013: 1, S0280: 1,
L0021: 1, H0575: 1,
S0346: 1, H0581: 1,
H0374: 1, H0309: 1,
H0546: 1, H0024: 1,
H0373: 1, H0051: 1,
H0356: 1, H0266: 1,
H0179: 1, S0318: 1,
S0316: 1, H0687: 1,
H0288: 1, H0031: 1,
L0142: 1, H0628: 1,
H0032: 1, S0036: 1,
H0090: 1, H0591: 1,
H0038: 1, H0616: 1,
H0063: 1, H0413: 1,
H0561: 1, H0366: 1,
S0438: 1, S0440: 1,
H0641: 1, S0144: 1,
H0529: 1, L0762: 1,
L0769: 1, L0641: 1,
L0773: 1, L0381: 1,
L0775: 1, L0375: 1,
L0606: 1, L0809: 1,
L0529: 1, L0368: 1,
L0666: 1, L0664: 1,
H0144: 1, H0701: 1,
H0520: 1, H0659: 1,
H0670: 1, H0651: 1,

HADDD29	HADDD29R	995	181 - 342	3170	Asn-14 to Thr-26.	H0539: 1, H0710: 1, S0152: 1, H0522: 1, H0696: 1, S0044: 1, S0406: 1, H0478: 1, L0756: 1, L0753: 1, S0031: 1, H0595: 1, S0434: 1, L0592: 1, S0011: 1, H0653: 1, S0192: 1, S0242: 1, H0542: 1, H0543: 1 and H0422: 1.
HADET44	HADET44R	996	2 - 304	3171		
HAHGU75	HAHGU75R	997	1 - 501	3172		
HAHHD12	HAHHD12R	998	1 - 96	3173	Leu-3 to Met-9, Gln-24 to Thr-32.	
HALSG11	HALSG11R	999	2 - 364	3174	Ser-25 to Cys-36, Gln-39 to Asp-56.	
HANGA96	HANGA96R	1000	40 - 246	3175	Asn-49 to Asp-54.	
HAOSA43	HAOSA43R	1001	61 - 222	3176		L0759: 8, S0010: 7, L0742: 7, L0455: 6, S0007: 5, L0809: 4, L0439: 4, H0013: 3, L0768: 3, L0753: 3, H0686: 2, S0134: 2, S0222: 2, H0052: 2, H0024: 2, L0769: 2, L0638: 2, L0521: 2, L0794: 2, L0438: 2, L0589: 2, L0608: 2,

HAOSB87	HAOSB87R	1002	1 - 348	3177	Val-77 to Val-86.	H0543: 2, H0341: 1, H0441: 1, H0586: 1, S0346: 1, S0049: 1, H0569: 1, H0050: 1, T0010: 1, H0598: 1, H0272: 1, L0666: 1, H0144: 1, H0689: 1, L0747: 1, L0366: 1 and H0423: 1.
HAOSC40	HAOSC40R	1003	55 - 327	3178	Pro-69 to Leu-76.	L0766: 8, L0803: 7, L0731: 7, L0758: 5, S0358: 4, S0360: 4, L0794: 4, H0547: 4, S0440: 3, L0662: 3, L0659: 3, L0809: 3, L0666: 3, L0663: 3, S0374: 3, L0755: 3, L0596: 3, H0543: 3, H0583: 2, H0004: 2, H0622: 2, L0194: 2, H0038: 2, S0422: 2, L0771: 2, L0551: 2, L0774: 2, L0655: 2, L0526: 2, L0665: 2, H0659: 2, L0747: 2, L0750: 2, L0756: 2, S0436: 2, H0624: 1, H0170: 1, H0159: 1, H0686: 1, H0685: 1,

HAOSE70	HAOSE70R	1004	85 - 273	3179	H0650: 1, H0657: 1, S0116: 1, H0341: 1, S0442: 1, S0376: 1, S0444: 1, H0619: 1, L0717: 1, H0411: 1, S0222: 1, H0587: 1, H0497: 1, H0427: 1, H0042: 1, H0596: 1, T0110: 1, H0081: 1, H0050: 1, H0687: 1, S0003: 1, H0252: 1, H0213: 1, H0163: 1, H0591: 1, H0634: 1, H0616: 1, H0063: 1, H0413: 1, H0100: 1, H0529: 1, L0638: 1, L0637: 1, L0800: 1, L0764: 1, L0773: 1, L0521: 1, L0768: 1, L0784: 1, L0783: 1, L0788: 1, L0790: 1, L0664: 1, H0436: 1, S0392: 1, H0627: 1, L0748: 1, L0754: 1, L0749: 1, L0759: 1, H0445: 1, S0434: 1, H0423: 1, S0412: 1 and S0424: 1.
HAOSF68	HAOSF68R	1005	1 - 630	3180	

HAOSG95	HAOSG95R	1006	51 - 485	3181	Arg-5 to Arg-17, Asp-25 to Val-31.	
HAOSI79	HAOSI79R	1007	1 - 543	3182	Val-7 to Glu-13, Thr-20 to Arg-26, Lys-34 to Phe-40, Arg-46 to Lys-51.	
HAOSJ27	HAOSJ27R	1008	2 - 166	3183	Lys-27 to Gln-39, Gln-47 to Thr-52.	
HAOSJ33	HAOSJ33R	1009	3 - 353	3184	Leu-3 to Glu-14, Ser-95 to Ala-105.	
HAOSJ73	HAOSJ73R	1010	1 - 114	3185		
HAOSK38	HAOSK38R	1011	1 - 303	3186	Pro-24 to Val-49, Tyr-51 to Leu-56.	H0585: 27, H0556: 17, L0595: 15, L0591: 13, L0593: 13, H0046: 12, H0543: 12, H0521: 11, L0747: 11, L0596: 11, H0265: 10, H0040: 10, H0266: 9, H0038: 9, H0494: 9, L0588: 9, H0656: 8, H0581: 8, H0617: 8, L0664: 8, H0519: 8, L0601: 8, L0163: 7, H0083: 7, H0529: 7, L0665: 7, L0602: 7, H0657: 6, H0599: 6, H0618: 6, H0318: 6, H0551: 6, L0666: 6, H0547: 6, H0542: 6, H0141: 5, H0402: 5, S0358: 5.

S0360: 5, S0046: 5,
H0013: 5, H0052: 5,
H0616: 5, H0087: 5,
H0264: 5, T0041: 5,
T0042: 5, S0440: 5,
L0662: 5, L0774: 5,
L0783: 5, L0748: 5,
L0751: 5, L0758: 5,
H0445: 5, L0599: 5,
L0608: 5, H0341: 4,
S0420: 4, S0354: 4,
H0619: 4, S0222: 4,
H0039: 4, H0213: 4,
H0560: 4, L0521: 4,
L0663: 4, L0565: 4,
L0750: 4, L0752: 4,
L0362: 4, L0615: 3,
H0686: 3, H0650: 3,
S0356: 3, S0045: 3,
H0253: 3, H0123: 3,
H0251: 3, H0123: 3,
T0023: 3, L0456: 3,
H0124: 3, H0561: 3,
H0509: 3, H0641: 3,
H0646: 3, L0598: 3,
L0646: 3, L0768: 3,
L0655: 3, H0144: 3,
H0689: 3, H0659: 3,
H0666: 3, S0152: 3,

H0522: 3, S0028: 3,
S0434: 3, H0423: 3,
S0424: 3, H0506: 3,
H0352: 3, H0624: 2,
S0218: 2, H0663: 2,
S0376: 2, H0580: 2,
H0393: 2, L0717: 2,
H0261: 2, H0333: 2,
H0635: 2, S0049: 2,
H0596: 2, T0115: 2,
H0597: 2, H0024: 2,
L0483: 2, T0006: 2,
H0031: 2, H0673: 2,
H0090: 2, H0591: 2,
H0634: 2, H0063: 2,
H0059: 2, S0142: 2,
S0210: 2, L0770: 2,
L0769: 2, L0638: 2,
L0372: 2, L0649: 2,
L0776: 2, L0659: 2,
L0636: 2, L0542: 2,
H0520: 2, H0593: 2,
S0328: 2, H0696: 2,
S0044: 2, H0436: 2,
H0631: 2, S3012: 2,
S3014: 2, S0206: 2,
L0742: 2, L0439: 2,
L0592: 2, L0361: 2,
H0136: 2, H0422: 2,
H0222: 1, H0159: 1,

H0685: 1, S0342: 1,
S0134: 1, H0583: 1,
H0483: 1, H0255: 1,
H0661: 1, H0662: 1,
H0305: 1, S0418: 1,
S0444: 1, H0489: 1,
H0637: 1, H0151: 1,
S0132: 1, H0411: 1,
S0278: 1, H0369: 1,
H0549: 1, H0441: 1,
H0392: 1, H0298: 1,
T0104: 1, H0600: 1,
H0592: 1, H0587: 1,
H0497: 1, H0331: 1,
H0574: 1, L0622: 1,
L0623: 1, H0486: 1,
T0039: 1, T0040: 1,
T0114: 1, H0244: 1,
H0069: 1, S0280: 1,
H0156: 1, H0004: 1,
S0346: 1, T0071: 1,
H0421: 1, H0085: 1,
H0205: 1, H0204: 1,
H0545: 1, L0471: 1,
H0012: 1, H0246: 1,
H0510: 1, H0375: 1,
H0179: 1, H0687: 1,
S0314: 1, H0328: 1,
H0615: 1, H0688: 1,
H0428: 1, H0622: 1,

H0424: 1, H0644: 1, L0142: 1, H0628: 1, H0169: 1, H0674: 1, S0364: 1, L0455: 1, H0316: 1, H0135: 1, T0067: 1, H0488: 1, H0412: 1, H0413: 1, S0038: 1, H0100: 1, L0351: 1, L0564: 1, H0022: 1, S0352: 1, S0150: 1, H0130: 1, H0647: 1, S0144: 1, S0426: 1, L0369: 1, L0763: 1, L0371: 1, L0761: 1, L0667: 1, L0627: 1, L0764: 1, L0773: 1, L0648: 1, L0767: 1, L0650: 1, L0775: 1, L0653: 1, L0382: 1, L0809: 1, L0793: 1, S0216: 1, H0697: 1, S0310: 1, S0126: 1, H0684: 1, H0435: 1, H0658: 1, H0660: 1, H0672: 1, S0378: 1, S0380: 1, H0518: 1, H0134: 1, S0406: 1, H0555: 1, S0037: 1, S0027: 1, L0754: 1, L0745: 1,

L0786: 1, L0779: 1, L0757: 1, L0759: 1, H0444: 1, H0707: 1, S0436: 1, L0597: 1, L0594: 1, S0026: 1, L0697: 1, H0677: 1 and L0600: 1.	S0418: 10, L0749: 9, L0809: 7, S0406: 6, L0766: 5, L0748: 5, L0740: 5, L0752: 5, L0731: 5, S0360: 4, L0509: 4, L0665: 4, L0754: 4, S0424: 4, H0638: 3, S0420: 3, S0410: 3, H0013: 3, H0318: 3, H0545: 3, H0050: 3, H0040: 3, L0664: 3, H0658: 3, L0521: 3, L0750: 3, H0556: 2, H0341: 2, H0580: 2, S0222: 2, H0333: 2, L0471: 2, H0620: 2, H0687: 2, H0553: 2, H0673: 2, H0674: 2, H0068: 2, H0551: 2, H0494: 2, H0560: 2, S0438: 2, S0440: 2, H0509: 2, L0769: 2, L0638: 2,				
	3187				
	3 - 269				
	1012				
	HAOSL36R				
IIAOSL36					

L0771: 2, L0662: 2,
L0767: 2, L0804: 2,
L0774: 2, L0775: 2,
L0776: 2, L0659: 2,
H0144: 2, S0374: 2,
H0547: 2, H0684: 2,
H0435: 2, H0626: 2,
H0627: 2, L0439: 2,
L0756: 2, L0779: 2,
L0758: 2, L0759: 2,
L0605: 2, L0592: 2,
L0593: 2, L0595: 2,
H0543: 2, H0265: 1,
H0686: 1, H0657: 1,
H0484: 1, H0669: 1,
S0356: 1, S0444: 1,
H0675: 1, H0393: 1,
S0278: 1, H0613: 1,
H0497: 1, H0331: 1,
H0486: 1, H0618: 1,
H0253: 1, T0048: 1,
H0052: 1, T0110: 1,
H0544: 1, H0246: 1,
H0051: 1, H0355: 1,
H0594: 1, H0039: 1,
H0622: 1, S0368: 1,
H0030: 1, H0376: 1,
H0135: 1, H0038: 1,
H0087: 1, H0272: 1,
H0412: 1, H0413: 1,

| HAOSL47 | HAOSL47R | 1013 | 2 - 409 | 3188 | Thr-12 to Thr-17, Leu-31 to Met-36, Pro-97 to Lys-103, Gln-126 to Trp-136. | L0748: 23, S0358: 12, H0616: 10, L0750: 8, L0752: 8, L0596: 8, H0031: 7, H0494: 7. | H0056: 1, H0623: 1, L0564: 1, T0041: 1, S0150: 1, H0633: 1, S0144: 1, H0538: 1, S0210: 1, S0002: 1, L0369: 1, L0506: 1, L0500: 1, L0501: 1, L0646: 1, L0374: 1, L0765: 1, L0363: 1, L0381: 1, L0803: 1, L0653: 1, L0493: 1, L0526: 1, L0783: 1, L0383: 1, L0666: 1, L0663: 1, S0006: 1, H0593: 1, S0126: 1, H0711: 1, H0682: 1, H0670: 1, H0672: 1, H0651: 1, S0152: 1, S0454: 1, S0262: 1, L0356: 1, S0390: 1, L0747: 1, L0780: 1, L0753: 1, L0755: 1, L0757: 1, H0707: 1, L0485: 1, L0599: 1, L0608: 1, L0601: 1, H0667: 1 and H0008: 1. |

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H0556: 6, H0024: 6,
L0770: 6, L0588: 6,
S0360: 5, S0046: 5,
S0476: 5, L0774: 5,
H0547: 5, L0439: 5,
L0740: 5, L0749: 5,
L0755: 5, S0420: 4,
S0250: 4, H0039: 4,
H0135: 4, H0551: 4,
L0766: 4, H0144: 4,
S0126: 4, L0742: 4,
L0743: 4, L0747: 4,
L0757: 4, L0591: 4,
H0170: 3, H0663: 3,
S0444: 3, H0486: 3,
H0200: 3, H0188: 3,
H0038: 3, H0100: 3,
L0769: 3, L0773: 3,
L0775: 3, S0031: 3,
H0445: 3, H0136: 3,
H0542: 3, H0543: 3,
H0624: 2, H0717: 2,
S0212: 2, H0484: 2,
H0255: 2, S0418: 2,
S0408: 2, S0410: 2,
H0393: 2, H0351: 2,
H0411: 2, S0222: 2,
H0592: 2, H0574: 2,
H0635: 2, H0427: 2,

H0036: 2, H0318: 2,
H0545: 2, H0009: 2,
H0178: 2, H0014: 2,
H0644: 2, H0617: 2,
H0032: 2, H0124: 2,
H0068: 2, H0040: 2,
T0067: 2, H0413: 2,
H0623: 2, T0041: 2,
T0042: 2, S0440: 2,
S0150: 2, H0641: 2,
H0529: 2, L0502: 2,
L0500: 2, L0761: 2,
L0764: 2, L0662: 2,
L0767: 2, L0776: 2,
L0657: 2, L0659: 2,
L0782: 2, L0783: 2,
H0690: 2, H0659: 2,
H0672: 2, S0328: 2,
H0134: 2, H0555: 2,
S3012: 2, L0754: 2,
L0759: 2, L0590: 2,
L0592: 2, L0593: 2,
L0594: 2, H0265: 1,
T0002: 1, H0686: 1,
S0040: 1, S0134: 1,
H0583: 1, H0657: 1,
H0341: 1, S0180: 1,
H0483: 1, H0661: 1,
H0664: 1, S0356: 1,
S0442: 1, S0376: 1,

H0580: 1, S0007: 1,
S0132: 1, L0717: 1,
H0431: 1, H0370: 1,
H0392: 1, H0600: 1,
H0586: 1, H0333: 1,
L0622: 1, T0060: 1,
T0109: 1, H0013: 1,
H0250: 1, H0069: 1,
L0021: 1, H0599: 1,
H0575: 1, H0618: 1,
S0182: 1, H0251: 1,
H0263: 1, H0596: 1,
L0738: 1, H0041: 1,
H0081: 1, H0012: 1,
H0620: 1, L0163: 1,
S0388: 1, S0051: 1,
H0375: 1, H0266: 1,
H0271: 1, H0687: 1,
H0290: 1, S0003: 1,
S0022: 1, H0428: 1,
L0194: 1, H0553: 1,
H0628: 1, H0673: 1,
H0169: 1, L0456: 1,
H0708: 1, S0366: 1,
S0036: 1, H0163: 1,
H0090: 1, H0591: 1,
H0087: 1, L0060: 1,
H0379: 1, H0412: 1,
H0560: 1, S0382: 1,
S0456: 1, S0438: 1,

| HAOSP50 | HAOSP50R | 1014 | 183 - 380 | 3189 | Ser-53 to Pro-60. | H0509: 1, S0210: 1, L0520: 1, L0762: 1, L0501: 1, L0765: 1, L0771: 1, L0521: 1, L0768: 1, L0387: 1, L0498: 1, L0375: 1, L0806: 1, L0655: 1, L0661: 1, L0807: 1, L0527: 1, L0382: 1, L0809: 1, L0519: 1, L0663: 1, S0428: 1, S0374: 1, H0723: 1, H0519: 1, H0593: 1, H0658: 1, H0648: 1, H0651: 1, S0330: 1, H0539: 1, S0378: 1, H0710: 1, S0152: 1, H0521: 1, H0522: 1, S0044: 1, H0576: 1, S0390: 1, S0028: 1, S0124: 1, S0032: 1, L0753: 1, S0434: 1, L0485: 1, L0581: 1, L0595: 1, L0366: 1, S0106: 1, H0668: 1, S0026: 1, H0653: 1, H0665: 1, S0194: 1, H0423: 1, H0422: 1, S0456: 1 and H0352: 1. |

HAOSS30	HAOSS30R	1015	3 - 509	3190	Pro-11 to His-21, Glu-30 to Glu-41, Arg-55 to Ser-64, Arg-89 to Thr-96, Cys-99 to Gln-106, Pro-116 to His-124.	L0439: 16, S0222: 5, H0733: 4, L0770: 4, L0809: 4, L0747: 4, S0356: 3, L0471: 3, S0366: 3, L0766: 3, S0436: 3, H0556: 2, L0622: 2, H0373: 2, S6028: 2, H0266: 2, H0687: 2, H0617: 2, L0637: 2, L0803: 2, L0789: 2, H0518: 2, L0748: 2, S0434: 2, L0604: 2, H0686: 1, S0040: 1, H0583: 1, S0001: 1, S0420: 1, H0729: 1, H0722: 1, H0619: 1, H0333: 1, H0318: 1, H0007: 1, H0052: 1, H0009: 1, L0163: 1, H0051: 1, H0428: 1, H0181: 1, S0364: 1, H0708: 1, H0135: 1, H0413: 1, S0440: 1, L0375: 1, L0764: 1, L5575: 1, L0378: 1, L0652: 1, L0438: 1, S0126: 1, L0658: 1, H0539: 1, L0740: 1, L0749: 1, L0779: 1, L0752: 1 and

HAOSU85	HAOSU85R	1016	2 - 508	3191		L0758: 1, H0686: 2, L0362: 2, H0100: 1, H0646: 1 and L0766: 1.
HAOSW92	HAOSW92R	1017	93 - 317	3192	His-1 to Phe-7, Pro-16 to His-26, Asp-44 to Ser-52.	L0777: 8, L0754: 6, L0662: 4, L0766: 4, S0136: 3, S0406: 2, L0744: 2, L0780: 2, L0752: 2, L0594: 2, H0556: 1, H0686: 1, S0418: 1, S0376: 1, S0360: 1, H0580: 1, H0587: 1, H0486: 1, S0280: 1, L0021: 1, L0105: 1, H0428: 1, L0055: 1, H0212: 1, H0040: 1, S0422: 1, L0639: 1, L5575: 1, L0772: 1, L0372: 1, L0764: 1, L0794: 1, L0522: 1, L0803: 1, L0659: 1, L0529: 1, L0665: 1, H0144: 1, H0547: 1, H0519: 1, H0684: 1, H0659: 1, H0670: 1, L0748: 1, L0756: 1, L0757: 1, L0758: 1, L0759: 1, L0596: 1, L0589: 1, L0605: 1, L0599: 1,

HAOTB47	HAOTB47R	1018	3 - 107	3193		H0667: 1, I10542: 1 and H0506: 1.
HAOTB58	HAOTB58R	1019	336 - 485	3194	Ile-3 to Asp-9.	L0756: 6, L0777: 6, S0408: 5, L0770: 5, H0547: 5, S0360: 4, L0665: 4, I10624: 3, H0687: 3, H0170: 2, H0686: 2, L0717: 2, H0497: 2, L0163: 2, L0794: 2, L0766: 2, S0126: 2, L0752: 2, L0731: 2, H0657: 1, H0656: 1, L0808: 1, H0341: 1, S0282: 1, S0442: 1, S0354: 1, S0045: 1, S0222: 1, H0486: 1, L0586: 1, H0156: 1, H0575: 1, H0318: 1, H0581: 1, H0052: 1, L0738: 1, H0266: 1, H0553: 1, H0169: 1, S0036: 1, H0087: 1, H0413: 1, S0422: 1, L0598: 1, L0520: 1, L0763: 1, L0638: 1, L0764: 1, L0803: 1, L0776: 1, L0658: 1, L0659: 1, L0809: 1, L0789: 1,

HAOTD32	HAOTD32R	1020	209 - 340	3195	L0664: 1, S0374: 1, H0520: 1, H0659: 1, H0670: 1, H0672: 1, H0436: 1, S0028: 1, L0439: 1, H0445: 1, L0589: 1, L0608: 1, S0192: 1, H0543: 1, H0423: 1, S0424: 1 and L0600: 1.	L0747: 28, S0192: 21, L0659: 17, L0740: 12, L0757: 10, S0360: 9, H0545: 9, L0662: 9, L0775: 9, L0665: 9, L0439: 9, L0664: 8, S0358: 7, L0666: 7, L0750: 7, L0601: 7, L0777: 6, L0731: 6, L0471: 5, S0003: 5, H0038: 5, H0547: 5, S0206: 5, L0748: 5, L0756: 5, L0752: 5, L0758: 5, S0011: 5, S0026: 5, T0049: 4, L0717: 4, H0575: 4, H0012: 4, H0620: 4, H0083: 4, H0090: 4, L0770: 4, L0764: 4, L0794: 4, L0766: 4, L0804: 4, L0375: 4,

L0806: 4, L0754: 4,
L0779: 4, L0596: 4,
L0588: 4, L0581: 4,
L0603: 4, H0556: 3,
H0431: 3, H0370: 3,
S0010: 3, H0596: 3,
S0388: 3, T0023: 3,
H0031: 3, H0264: 3,
L0564: 3, S0372: 3,
L0769: 3, L0667: 3,
L0521: 3, L0768: 3,
L0774: 3, L0657: 3,
L0783: 3, L0809: 3,
L0663: 3, S0126: 3,
S0122: 3, H0682: 3,
L0759: 3, L0591: 3,
H0352: 3, L0353: 2,
H0686: 2, S0040: 2,
H0295: 2, H0650: 2,
S0045: 2, S0046: 2,
S0132: 2, H0549: 2,
S0222: 2, H0427: 2,
H0156: 2, H0263: 2,
H0597: 2, H0546: 2,
H0046: 2, H0050: 2,
H0024: 2, T0010: 2,
H0375: 2, H0266: 2,
H0271: 2, H0030: 2,
H0553: 2, H0644: 2,
H0674: 2, H0135: 2,

H0591: 2, H0616: 2,
H0412: 2, H0413: 2,
H0059: 2, H0100: 2,
S0002: 2, L0369: 2,
L0520: 2, L0763: 2,
L0637: 2, L0761: 2,
L0372: 2, L0767: 2,
L0649: 2, L0803: 2,
L0776: 2, L0382: 2,
L0565: 2, H0690: 2,
H0659: 2, H0670: 2,
H0660: 2, H0648: 2,
H0672: 2, S0404: 2,
S0406: 2, H0555: 2,
H0478: 2, H0626: 2,
H0627: 2, L0070: 2,
S3014: 2, S0032: 2,
L0741: 2, L0590: 2,
L0592: 2, L0599: 2,
L0593: 2, L0595: 2,
H0543: 2, L0600: 2,
H0170: 1, H0171: 1,
H0265: 1, T0002: 1,
H0140: 1, S0470: 1,
H0294: 1, L0785: 1,
S0212: 1, S0282: 1,
H0484: 1, H0671: 1,
H0663: 1, H0664: 1,
H0662: 1, H0638: 1,
L0005: 1, S0442: 1,

S0444: 1, H0676: 1,
H0208: 1, H0619: 1,
H0393: 1, S6022: 1,
H0369: 1, H0550: 1,
H0455: 1, H0587: 1,
H0333: 1, H0331: 1,
H0574: 1, H0559: 1,
T0039: 1, H0013: 1,
S0280: 1, H0097: 1,
H0042: 1, T0082: 1,
S0474: 1, H0581: 1,
S0049: 1, H0251: 1,
H0309: 1, H0235: 1,
H0011: 1, H0051: 1,
H0021: 1, H0510: 1,
H0594: 1, S0334: 1,
H0687: 1, S0250: 1,
S0214: 1, H0119: 1,
T0006: 1, H0628: 1,
H0617: 1, L0055: 1,
H0032: 1, H0169: 1,
H0124: 1, H0598: 1,
H0551: 1, T0067: 1,
H0128: 1, L0475: 1,
H0560: 1, H0561: 1,
S0352: 1, S0438: 1,
S0440: 1, H0132: 1,
H0641: 1, H0647: 1,
H0646: 1, S0344: 1,
S0426: 1, L0598: 1,

| HAOTE06 | HAOTE06R | 1021 | 2 - 472 | 3196 | H0529: 1, L0762: 1, L0646: 1, L0800: 1, L0771: 1, L0773: 1, L0388: 1, L0650: 1, L0378: 1, L0805: 1, L0653: 1, L0527: 1, L0558: 1, L0636: 1, L0526: 1, L0647: 1, L0367: 1, L0787: 1, L0788: 1, H0144: 1, H0691: 1, H0520: 1, H0519: 1, H0365: 1, H0435: 1, H0658: 1, S0380: 1, H0521: 1, H0696: 1, S0044: 1, H0436: 1, S3012: 1, L0786: 1, L0780: 1, L0755: 1, S0260: 1, H0444: 1, H0343: 1, H0595: 1, S0436: 1, L0480: 1, L0605: 1, L0608: 1, L0362: 1, L0366: 1 and S0196: 1. L0803: 9, L0794: 8, L0740: 5, L0748: 4, L0439: 4, L0747: 4, L0438: 3, L0779: 3, L0758: 3, H0553: 2, L0646: 2, L0800: 2, L0804: 2, L0809: 2, |

HAOTF84	HAOTF84R	1022	68 - 208	3197	Lys-15 to Gln-22.		
						L0665: 2, H0670: 2, L0755: 2, L0608: 2, S00226: 2, H0170: 1, L0686: 1, H0717: 1, H0656: 1, S0444: 1, H0580: 1, H0156: 1, H0178: 1, H0014: 1, H0252: 1, H0615: 1, H0674: 1, H0090: 1, H0063: 1, L0637: 1, L0372: 1, L0764: 1, L0765: 1, L0662: 1, L0766: 1, L0649: 1, L0650: 1, L0806: 1, L0653: 1, L0657: 1, L0659: 1, L0517: 1, L0529: 1, L5622: 1, L0789: 1, L0790: 1, L0663: 1, L0664: 1, H0144: 1, H0723: 1, S0126: 1, H0659: 1, S0378: 1, S0152: 1, L0741: 1, L0777: 1, S0434: 1, L0594: 1, L0595: 1 and H0667: 1.	L0757: 13, L0731: 10, L0754: 7, L0770: 4, S0360: 3, H0553: 3, H0551: 3, L0769: 3, L0662: 3, L0659: 3,

L0747: 3, L0779: 3,
L0777: 3, L0755: 3,
H0686: 2, S0420: 2,
H0545: 2, L0471: 2,
H0673: 2, L0598: 2,
L0646: 2, L0794: 2,
L0806: 2, H0520: 2,
S0330: 2, H0436: 2,
L0740: 2, L0751: 2,
L0756: 2, L0599: 2,
S0011: 2, S0242: 2,
H0170: 1, L0002: 1,
L0808: 1, S0418: 1,
S0444: 1, L0717: 1,
H0587: 1, H0497: 1,
H0333: 1, H0632: 1,
T0039: 1, H0013: 1,
H0250: 1, L0021: 1,
H0052: 1, S0051: 1,
H0188: 1, S0003: 1,
S0022: 1, S0214: 1,
H0428: 1, H0031: 1,
H0628: 1, S0438: 1,
S0440: 1, H0647: 1,
L0763: 1, L0764: 1,
L0771: 1, L0648: 1,
L0649: 1, L0651: 1,
L0805: 1, L0652: 1,
L0655: 1, L0606: 1,
L0634: 1, L0542: 1,

HAOTF90	HAOTF90R	1023	3 - 176	3198	L0783: 1, L0809: 1, L0787: 1, L0666: 1, L0663: 1, H0144: 1, H0701: 1, S0374: 1, L0565: 1, H0547: 1, S0126: 1, H0682: 1, H0435: 1, H0659: 1, H0648: 1, H0539: 1, S0378: 1, S0406: 1, H0626: 1, S3012: 1, L0748: 1, L0749: 1, L0758: 1, L0759: 1, L0588: 1, L0589: 1, L0592: 1, L0593: 1, L0594: 1, H0653: 1, S0192: 1, S0194: 1 and H0352: 1.	L0439: 5, S0026: 5, H0624: 4, H0413: 4, S0418: 3, H0580: 3, H0373: 3, H0038: 3, H0494: 3, H0144: 3, H0686: 2, S0358: 2, H0261: 2, S0222: 2, H0013: 2, H0581: 2, H0052: 2, H0545: 2, H0031: 2, H0529: 2, L0664: 2, S0027: 2, L0747: 2, L0777: 2, L0752: 2, L0755: 2,

H0170: 1, S6024: 1,
S0134: 1, H0483: 1,
H0664: 1, H0449: 1,
H0458: 1, H0125: 1,
L0005: 1, S0045: 1,
S0132: 1, H0393: 1,
H0497: 1, H0485: 1,
H0486: 1, T0060: 1,
H0575: 1, H0122: 1,
H0036: 1, S0010: 1,
H0505: 1, S0049: 1,
H0196: 1, H0046: 1,
H0569: 1, H0123: 1,
L0471: 1, H0024: 1,
T0010: 1, H0266: 1,
S0312: 1, S0314: 1,
S0003: 1, S0214: 1,
H0622: 1, H0553: 1,
H0674: 1, S0364: 1,
S0036: 1, H0379: 1,
H0100: 1, L0370: 1,
T0042: 1, H0641: 1,
H0646: 1, S0144: 1,
S0426: 1, L0638: 1,
L0773: 1, L0775: 1,
L0378: 1, L0776: 1,
L0666: 1, L0438: 1,
H0547: 1, H0519: 1,
H0435: 1, H0539: 1,
H0518: 1, S0152: 1,

HAOTG75	HAOTG75R	1024	2 - 328	3199	Glu-1 to Gln-8, Pro-31 to Trp-36.	L0747: 28, S0192: 21, L0659: 17, L0740: 12, L0757: 10, S0360: 9, H0545: 9, L0662: 9, L0775: 9, L0665: 9, L0439: 9, L0664: 8, S0358: 7, L0666: 7, L0750: 7, L0601: 7, L0777: 6, L0731: 6, L0471: 5, S0003: 5, H0038: 5, H0547: 5, S0206: 5, L0748: 5, L0756: 5, L0752: 5, L0758: 5, S0011: 5, S0026: 5, T0049: 4, L0717: 4, H0575: 4, H0012: 4, H0620: 4, H0083: 4, H0090: 4, L0770: 4, L0764: 4, L0794: 4, L0766: 4, L0804: 4, L0375: 4, L0806: 4, L0754: 4, L0779: 4, L0596: 4, L0588: 4, L0581: 4.	H0521: 1, H0631: 1, L0740: 1, L0759: 1, S0260: 1, H0445: 1, L0596: 1, L0581: 1, L0604: 1, L0594: 1, H0667: 1 and L0697: 1.

L0603: 4, H0556: 3,
H0431: 3, H0370: 3,
S0010: 3, H0596: 3,
S0388: 3, T0023: 3,
H0031: 3, H0264: 3,
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L0521: 3, L0768: 3,
L0774: 3, L0657: 3,
L0783: 3, L0809: 3,
L0663: 3, S0126: 3,
S0122: 3, H0682: 3,
L0759: 3, L0591: 3,
H0352: 3, L0353: 2,
H0686: 2, S0040: 2,
H0295: 2, H0650: 2,
S0045: 2, S0046: 2,
S0132: 2, H0549: 2,
S0222: 2, H0427: 2,
H0156: 2, H0263: 2,
H0597: 2, H0546: 2,
H0046: 2, H0050: 2,
H0024: 2, T0010: 2,
H0375: 2, H0266: 2,
H0271: 2, H0030: 2,
H0553: 2, H0644: 2,
H0674: 2, H0135: 2,
H0591: 2, H0616: 2,
H0412: 2, H0413: 2,
H0059: 2, H0100: 2,

S0002: 2, L0369: 2, L0520: 2, L0763: 2, L0637: 2, L0761: 2, L0372: 2, L0767: 2, L0649: 2, L0803: 2, L0776: 2, L0382: 2, L0565: 2, H0690: 2, H0659: 2, H0670: 2, H0660: 2, H0648: 2, H0672: 2, S0404: 2, S0406: 2, H0555: 2, H0478: 2, H0626: 2, H0627: 2, L0070: 2, S3014: 2, S0032: 2, L0741: 2, L0590: 2, L0592: 2, L0599: 2, L0593: 2, L0595: 2, H0543: 2, L0600: 2, H0170: 1, H0171: 1, H0265: 1, T0002: 1, H0140: 1, S0470: 1, H0294: 1, L0785: 1, S0212: 1, S0282: 1, H0484: 1, H0671: 1, H0663: 1, H0664: 1, H0662: 1, H0538: 1, L0005: 1, S0442: 1, S0444: 1, H0676: 1, H0208: 1, H0619: 1, H0393: 1, S6022: 1,

H0369: 1, H0550: 1,
H0455: 1, H0587: 1,
H0333: 1, H0331: 1,
H0574: 1, H0559: 1,
T0039: 1, H0013: 1,
S0280: 1, H0097: 1,
H0042: 1, T0082: 1,
S0474: 1, H0581: 1,
S0049: 1, H0251: 1,
H0309: 1, H0235: 1,
H0011: 1, H0051: 1,
H0021: 1, H0510: 1,
H0594: 1, S0334: 1,
H0687: 1, S0250: 1,
S0214: 1, H0119: 1,
T0006: 1, H0628: 1,
H0617: 1, L0055: 1,
H0032: 1, H0169: 1,
H0124: 1, H0598: 1,
H0551: 1, T0067: 1,
H0128: 1, L0475: 1,
H0560: 1, H0561: 1,
S0352: 1, S0438: 1,
S0440: 1, H0132: 1,
H0641: 1, H0647: 1,
H0646: 1, S0344: 1,
S0426: 1, L0598: 1,
H0529: 1, L0762: 1,
L0646: 1, L0800: 1,
L0771: 1, L0773: 1,

HAOTH28	HAOTH28R	1025	33 - 164	3200	L0388: 1, L0650: 1, L0378: 1, L0805: 1, L0653: 1, L0527: 1, L0558: 1, L0636: 1, L0526: 1, L0647: 1, L0367: 1, L0787: 1, L0788: 1, H0144: 1, H0691: 1, H0520: 1, H0519: 1, H0365: 1, H0435: 1, H0658: 1, S0380: 1, H0521: 1, H0696: 1, S0044: 1, H0436: 1, S3012: 1, L0786: 1, L0780: 1, L0755: 1, S0260: 1, H0444: 1, H0343: 1, H0595: 1, S0436: 1, L0480: 1, L0605: 1, L0608: 1, L0362: 1, L0366: 1 and S0196: 1.
HAOTI07	HAOTI07R	1026	3 - 398	3201	Pro-1 to Arg-6, Met-12 to Ser-21.
HAOTT79	HAOTT79R	1027	3 - 392	3202	
HAOTU79	HAOTU79R	1028	15 - 455	3203	
HAOTW22	HAOTW22R	1029	1 - 201	3204	Ser-35 to Ser 41, Ile-50 to Gly-55.
HAOTW30	HAOTW30R	1030	376 - 564	3205	Arg-1 to Gly-7.
HAOTW65	HAOTW65R	1031	113 - 475	3206	H0686: 2 and S0358: 1.

HAPNK45	HAPNK45R	1032	68 - 232	3207		
HAPPR43	HAPPR43R	1033	200 - 313	3208	Lys-1 to Ser-6, Ala-26 to Thr-31.	
HAPQO14	HAPQO14R	1034	5 - 193	3209	Ser-1 to Pro-11.	
HAQML40	HAQML40R	1035	1 - 258	3210		
HASME85	HASME85R	1036	208 - 396	3211		
HAUAK54	HAUAK54R	1037	3 - 299	3212		
HAVMB46	HAVMB46R	1038	84 - 203	3213	Ser-13 to Arg-19, Ile-28 to Asn-33.	
HAVMW69	HAVMW69R	1039	3 - 116	3214		L0439: 2, L0755: 2, S0412: 2, H0170: 1, H0497: 1, H0591: 1, H0038: 1, L0641: 1, L0774: 1, L0651: 1, L0776: 1, L4501: 1, L0666: 1, L0663: 1, H0144: 1, L0438: 1, S0126: 1, H0659: 1, H0648: 1, L0602: 1, L0748: 1, L0749: 1, L0750: 1, L0756: 1, L0752: 1, L0759: 1, L0599: 1 and L0362: 1.
HAVNQ92	HAVNQ92RA	1040	1 - 165	3215	Ala-19 to Arg-24.	
HAVOJ11	HAVOJ11R	1041	108 - 239	3216	Gly-1 to Thr-12, Glu-23 to Lys-38.	
HAZAC68	HAZAC68R	1042	3 - 587	3217	Ser-119 to Lys-124.	
HAZAD13	HAZAD13R	1043	2 - 517	3218	Lys-32 to Arg-40,	

HAZAD40	HAZAD40R	1044	191 - 445	3219	Ser-54 to Gly-59, Gln-133 to Ala-147, Gln-153 to Gln-164,	S0360: 1, H0486: 1, L0761: 1, L0803: 1, L0774: 1, L0666: 1, L0663: 1, L0665: 1, H0520: 1, H0690: 1, H0435: 1 and L0747: 1.
HAZAB44	HAZAE44R	1045	3 - 512	3220	Val-9 to Gly-24.	
HAZAG23	HAZAG23R	1046	2 - 466	3221	Gln-12 to Thr-20, Cys-39 to Asn-45, Thr-60 to Gly-66, Lys-99 to Asp-106, Asp-119 to Pro-127.	H0424: 16, S0380: 13, L0748: 13, L0750: 12, S0440: 10, S0444: 9, L0755: 9, L0758: 9, S0192: 9, H0484: 8, S0358: 8, H0545: 8, L0809: 8, L0747: 8, L0749: 8, S0360: 7, S0410: 7, S0406: 7, L0752: 7, L0766: 6, S0374: 6, L0751: 6, L0754: 6, H0423: 6, S0442: 5, H0672: 5, S0378: 5, S0404: 5, L0759: 5, H0556: 4, S0356: 4, S0376: 4, H0546: 4, H0150: 4, S0438: 4, L0775: 4, L0776: 4, L0518: 4, S0328: 4, L0740: 4,

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H0422: 4, H0685: 3,
S0116: 3, H0483: 3,
H0638: 3, H0486: 3,
H0318: 3, H0309: 3,
H0597: 3, H0617: 3,
H0494: 3, S0144: 3,
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L0774: 3, L0806: 3,
L0783: 3, L0528: 3,
H0593: 3, S0126: 3,
H0690: 3, H0658: 3,
H0670: 3, S0330: 3,
H0696: 3, S0028: 3,
L0742: 3, L0439: 3,
L0731: 3, L0757: 3,
H0543: 3, H0149: 2,
S0218: 2, H0341: 2,
H0306: 2, H0402: 2,
S0420: 2, H0722: 2,
S0476: 2, H0392: 2,
H0333: 2, H0101: 2,
H0204: 2, H0421: 2,
H0009: 2, H0231: 2,
H0024: 2, H0023: 2,
H0031: 2, H0271: 2,
H0166: 2, H0644: 2,
H0068: 2, H0124: 2,
H0068: 2, H0616: 2,

H0059: 2, H0560: 2,
H0509: 2, S0344: 2,
S0422: 2, L0769: 2,
L0764: 2, L0765: 2,
L0651: 2, L0657: 2,
H0689: 2, H0684: 2,
H0659: 2, H0660: 2,
H0648: 2, H0521: 2,
S0044: 2, S0392: 2,
L0743: 2, S0436: 2,
L0588: 2, L0590: 2,
H0542: 2, S0446: 2,
L0600: 2, H0008: 2,
H0624: 1, H0170: 1,
H0171: 1, S0040: 1,
S6024: 1, H0295: 1,
H0294: 1, S0114: 1,
H0657: 1, H0656: 1,
L0760: 1, S0212: 1,
H0255: 1, H0663: 1,
S0418: 1, S0354: 1,
H0676: 1, S0408: 1,
T0008: 1, H0637: 1,
H0730: 1, H0393: 1,
S0278: 1, H0369: 1,
S0222: 1, H0370: 1,
H0330: 1, H0592: 1,
H0586: 1, H0574: 1,
L0622: 1, H0013: 1,
H0427: 1, S0280: 1,

H0156: 1, H0575: 1,
H0004: 1, H0274: 1,
H0253: 1, T0048: 1,
S0474: 1, H0085: 1,
H0596: 1, H0544: 1,
H0086: 1, H0123: 1,
L0471: 1, H0012: 1,
H0620: 1, H0057: 1,
T0010: 1, H0375: 1,
H0594: 1, H0179: 1,
H0188: 1, H0687: 1,
H0284: 1, H0252: 1,
T0023: 1, S0368: 1,
T0006: 1, H0604: 1,
H0213: 1, H0553: 1,
L0055: 1, H0032: 1,
H0673: 1, H0674: 1,
S0366: 1, S0036: 1,
H0163: 1, H0038: 1,
H0634: 1, H0087: 1,
T0067: 1, H0264: 1,
T0041: 1, H0625: 1,
H0561: 1, S0466: 1,
H0131: 1, S0150: 1,
H0633: 1, S0472: 1,
H0529: 1, L0762: 1,
L0763: 1, L0770: 1,
L3905: 1, L0761: 1,
L0772: 1, L0372: 1,
L0646: 1, L0374: 1,

HAZAG92	HAZAG92R	1047	282 - 467	3222	Pro-48 to Gly-59.	L0521: 1, L0662: 1, L0364: 1, L5564: 1, L0378: 1, L0655: 1, L0379: 1, L0656: 1, L0659: 1, L0540: 1, L0526: 1, L0384: 1, L0544: 1, L0541: 1, L0789: 1, L0793: 1, L0666: 1, L0664: 1, L0665: 1, H0726: 1, H0547: 1, H0683: 1, H0651: 1, H0539: 1, H0518: 1, S0350: 1, H0555: 1, H0576: 1, H0627: 1, S3014: 1, S0027: 1, S0032: 1, L0756: 1, L0786: 1, L0777: 1, L0753: 1, H0445: 1, L0591: 1, L0592: 1, L0608: 1 and L0603: 1.	
HAZAH79	HAZAH79R	1048	138 - 515	3223	Gly-2 to Ser-9, Pro-46 to Cys-60, Pro-62 to His-69, Pro-81 to Thr-91, Ala-96 to Ser-101.		
HAZAI23	HAZAI23R	1049	1 - 165	3224	Lys-11 to Ser-16, Arg-20 to Glu-28.		L0747: 21, L0748: 18, L0750: 15, S0408: 11, L0771: 10, L0775: 9,

L0742: 8, S0410: 6,
L0756: 6, L0752: 6,
L0758: 6, L0731: 5,
H0341: 4, L0766: 4,
L0803: 4, L0776: 4,
S0126: 4, H0170: 3,
H0486: 3, S0346: 3,
H0204: 3, H0545: 3,
L0471: 3, S0440: 3,
L0769: 3, L0772: 3,
L0804: 3, H0214: 3,
S0404: 3, L0744: 3,
L0754: 3, L0757: 3,
H0506: 3, H0171: 2,
H0685: 2, S0420: 2,
S0356: 2, S0358: 2,
S0045: 2, H0587: 2,
H0069: 2, L0021: 2,
H0575: 2, T0048: 2,
H0318: 2, H0581: 2,
H0597: 2, H0009: 2,
H0014: 2, H0510: 2,
H0622: 2, H0031: 2,
S0364: 2, H0591: 2,
H0056: 2, H0494: 2,
S0438: 2, L0770: 2,
L0761: 2, L0521: 2,
L0649: 2, L0650: 2,
L0526: 2, L0792: 2,
L0666: 2, L0665: 2,

H0690: 2, H0522: 2,
H0134: 2, L0743: 2,
L0740: 2, L0759: 2,
L0587: 2, H0422: 2,
H0624: 1, T0002: 1,
H0294: 1, H0657: 1,
H0484: 1, H0255: 1,
H0661: 1, H0664: 1,
H0176: 1, H0402: 1,
S0442: 1, S0376: 1,
H0637: 1, S0046: 1,
S0476: 1, H0393: 1,
L0717: 1, H0351: 1,
S0278: 1, S0222: 1,
H0392: 1, H0438: 1,
H0331: 1, L0622: 1,
H0635: 1, S0182: 1,
S0474: 1, H0173: 1,
H0052: 1, H0596: 1,
H0327: 1, H0546: 1,
H0150: 1, H0565: 1,
H0123: 1, H0081: 1,
H0051: 1, S0051: 1,
H0083: 1, H0594: 1,
H0028: 1, S0214: 1,
H0252: 1, H0428: 1,
H0213: 1, H0644: 1,
H0617: 1, H0163: 1,
H0090: 1, H0616: 1,
H0087: 1, H0488: 1,

	HAZAI87	HAZAI87R	1050	264 - 428	3225	Phe-34 to Lys-41.	H0413: 1, T0069: 1, S0038: 1, T0041: 1, T0042: 1, H0512: 1, H0560: 1, H0646: 1, S0344: 1, S0422: 1, H0529: 1, L0520: 1, L0763: 1, L0646: 1, L0764: 1, L0773: 1, L0768: 1, L0522: 1, L0774: 1, L0784: 1, L0806: 1, L0805: 1, L0653: 1, L0655: 1, L0379: 1, L0807: 1, L0659: 1, L0517: 1, L0783: 1, L0519: 1, L0789: 1, L0791: 1, L0664: 1, S0053: 1, L0683: 1, H0659: 1, H0658: 1, S0328: 1, H0710: 1, H0696: 1, S0406: 1, L0751: 1, L0749: 1, L0786: 1, L0780: 1, L0753: 1, L0755: 1, S0260: 1, L0366: 1, H0653: 1, H0667: 1, H0542: 1, H0543: 1 and H0712: 1.	L0659: 6, L0662: 5, S0212: 4, S0003: 4, H0551: 4, S0192: 4.

S0376: 3, S0440: 3,
S0374: 3, H0521: 3,
S0040: 2, S0418: 2,
S0444: 2, H0580: 2,
H0486: 2, H0575: 2,
L0471: 2, H0024: 2,
H0553: 2, L0637: 2,
S0126: 2, S0406: 2,
S0028: 2, L0748: 2,
L0754: 2, L0757: 2,
S0434: 2, L0590: 2,
S0242: 2, H0686: 1,
H0685: 1, H0664: 1,
S0420: 1, L0005: 1,
S0360: 1, S0408: 1,
S0045: 1, S0476: 1,
S0278: 1, H0357: 1,
H0586: 1, T0039: 1,
H0635: 1, H0427: 1,
L0022: 1, H0004: 1,
H0505: 1, S0049: 1,
H0251: 1, H0263: 1,
T0003: 1, H0373: 1,
H0051: 1, H0356: 1,
H0622: 1, H0644: 1,
H0090: 1, H0412: 1,
H0623: 1, H0560: 1,
H0641: 1, H0633: 1,
S0142: 1, S0208: 1,
L0773: 1, L0521: 1,

HAZAI89	HAZAI89R	1051	3 - 260	3226		L0649: 1, L0803: 1, L0775: 1, L0528: 1, L0663: 1, L0664: 1, H0144: 1, L0565: 1, H0693: 1, H0520: 1, H0547: 1, H0689: 1, H0690: 1, H0435: 1, H0659: 1, H0658: 1, H0670: 1, H0660: 1, S0152: 1, H0555: 1, H0436: 1, S0432: 1, S0390: 1, S3014: 1, L0439: 1, L0758: 1, L0686: 1, S0436: 1, L0588: 1, S0196: 1, L0698: 1 and H0293: 1.
HAZAJ72	HAZAJ72R	1052	1 - 612	3227	Ser-54 to Ser-60, Ile-69 to Gly-74, Ala-17 to Asp-36, Thr-56 to Met-61.	S0420: 2, H0575: 2, S0418: 1, L0005: 1, S0356: 1, H0619: 1, H0097: 1, H0581: 1, H0012: 1, H0373: 1, H0266: 1, S0250: 1, T0042: 1, H0625: 1, H0561: 1, S0438: 1, S0150: 1, H0641: 1, S0210: 1, H0693: 1, S0519: 1, H0690: 1, L0748: 1 and H0653: 1.

HAZAQ80	HAZAQ80R	1053	27 - 389	3228	Thr-41 to Lys-46, Thr-53 to Gly-59, Ala-77 to Asp-84.	
HAZAW22	HAZAW22R	1054	2 - 172	3229	Ser-1 to Leu-14, Glu-39 to Thr-47.	L0748: 31, L0747: 18, L0752: 17, L0758: 17, L0777: 15, L0766: 13, H0014: 9, L0776: 9, L0751: 9, L0740: 7, L0779: 7, L0754: 6, H0040: 5, L0769: 5, S0330: 5, L0439: 5, L0756: 5, L0599: 5, S0356: 4, H0587: 4, H0622: 4, L0783: 4, L0744: 4, L0745: 4, L0749: 4, L0755: 4, S0031: 4, H0624: 3, S0222: 3, H0156: 3, S0010: 3, S0049: 3, S0051: 3, S0003: 3, H0591: 3, H0038: 3, L0763: 3, L0770: 3, L0662: 3, L0551: 3, L0803: 3, L0664: 3, H0144: 3, H0547: 3, L0521: 3, L0757: 3, L0759: 3, L0596: 3, L0608: 3, L0595: 3, S0114: 2, S0116: 2, H0341: 2, S0418: 2.

S0360: 2, H0619: 2,
H0393: 2, H0013: 2,
H0575: 2, H0318: 2,
H0581: 2, H0051: 2,
S0388: 2, H0428: 2,
T0006: 2, H0673: 2,
H0169: 2, H0674: 2,
S0036: 2, H0616: 2,
H0551: 2, H0268: 2,
L0625: 2, L0768: 2,
L0649: 2, L0775: 2,
L0806: 2, L0805: 2,
H0539: 2, L0731: 2,
S0260: 2, H0445: 2,
S0434: 2, L0605: 2,
L0594: 2, H0543: 2,
H0170: 1, H0171: 1,
H0716: 1, S6024: 1,
S0134: 1, S0218: 1,
H0583: 1, H0650: 1,
H0657: 1, L0785: 1,
S0212: 1, S0282: 1,
S0035: 1, S0030: 1,
H0305: 1, H0638: 1,
S0348: 1, S0420: 1,
L0005: 1, S0442: 1,
H0340: 1, S0476: 1,
H0645: 1, S0300: 1,
H0411: 1, S0278: 1,
H0549: 1, H0431: 1,

H0409: 1, H0331: 1,
H0574: 1, H0486: 1,
S0346: 1, H0421: 1,
H0052: 1, H0251: 1,
L0032: 1, H0085: 1,
H0545: 1, H0457: 1,
L0041: 1, H0050: 1,
H0024: 1, H0373: 1,
S6028: 1, S0250: 1,
H0615: 1, H0688: 1,
H0039: 1, S0364: 1,
H0361: 1, L0455: 1,
H0376: 1, H0135: 1,
H0090: 1, H0634: 1,
T0004: 1, T0042: 1,
S0014: 1, H0560: 1,
H0625: 1, S0438: 1,
H0509: 1, H0646: 1,
H0529: 1, L0637: 1,
L5575: 1, L0667: 1,
L0646: 1, L0764: 1,
L0771: 1, L5574: 1,
L0774: 1, L0655: 1,
L0527: 1, L0657: 1,
L0659: 1, L0809: 1,
L0789: 1, L0792: 1,
L0793: 1, L0663: 1,
L0665: 1, S0053: 1,
H0520: 1, H0519: 1,
S0126: 1, H0711: 1,

| HAZBH84 | HAZBH84R | 1055 | 225 - 359 | 3230 | S0003: 154, S0214: 41, H0545: 38, L0651: 34, H0546: 17, L0747: 15, L0757: 14, L0731: 10, L0659: 7, L0776: 6, L0749: 6, H0544: 5, S0122: 5, H0365: 5, L0740: 5, S0360: 4, L0771: 4, L0662: 4, L0768: 4, H0150: 3, H0169: 3, L0750: 3, L0779: 3, H0661: 2, S0376: 2, H0163: 2, S0144: 2, L0764: 2, L0766: 2, L0649: 2, L0775: 2, L0653: 2, L0666: 2, S0126: 2, L0754: 2, L0759: 2, H0171: 1, H0419: 1, | H0690: 1, H0660: 1, S0136: 1, H0522: 1, S0406: 1, H0555: 1, S3012: 1, S0027: 1, S0028: 1, L0743: 1, L0750: 1, L0604: 1, L0361: 1, S0026: 1, H0653: 1, S0192: 1, S0196: 1, H0542: 1, H0423: 1, S0412: 1 and S0424: 1. |

HAZBJ39	HAZBJ39R	1056	56 - 424	3231		
				Ser-29 to Ile-39, Gly-42 to Trp-48, Lys-82 to Val-92.	H0411: 1, H0357: 1, H0486: 1, L0021: 1, H0309: 1, H0231: 1, L0738: 1, H0099: 1, H0364: 1, H0039: 1, S0366: 1, H0038: 1, S0142: 1, S0002: 1, L0762: 1, L0640: 1, L0763: 1, L0637: 1, L0646: 1, L0773: 1, L0523: 1, L0655: 1, L0379: 1, L0783: 1, L0663: 1, L0664: 1, L0565: 1, S0008: 1, H0690: 1, S0328: 1, H0696: 1, L0755: 1, L0758: 1, H0595: 1 and H0506: 1.	L0758: 3, H0068: 2, L0749: 2, L0756: 2, L0731: 2, S0026: 2, H0136: 2, S0040: 1, L0005: 1, H0351: 1, L0318: 1, H0052: 1, H0530: 1, H0266: 1, S0003: 1, H0412: 1, T0004: 1, T0042: 1, S0422: 1, H0529: 1, H0517: 1, L0762: 1, L0763: 1, L0770: 1.

HAZBJ69	HAZBJ69R	1057	3 - 323	3232	Gly-1 to Pro-6, Lys-58 to Asn-71.	L0769: 1, L0766: 1, L0775: 1, L0809: 1, H0698: 1, H0690: 1, S0390: 1, S0028: 1, L0742: 1, L0748: 1, L0747: 1, L0779: 1, L0752: 1, L0755: 1, L0759: 1, S0308: 1, H0542: 1, H0543: 1 and H0423: 1.
HBAGS73	HBAGS73R	1058	207 - 371	3233	Pro-15 to Thr-22, Lys-28 to Arg-35.	
HBBBE13	HBBBE13R	1059	2 - 199	3234		
HBCPI58	HBCPI58RA	1060	3 - 245	3235		
HBJAC26	HBJAC26R	1061	267 - 446	3236		L0665: 3, H0318: 2, L0659: 2, S0330: 2, L0439: 2, L0599: 2, H0583: 1, H0038: 1, L0761: 1, L0771: 1, L0387: 1, L0655: 1, L0666: 1, L0779: 1, L0777: 1, L0758: 1 and L0608: 1.
HBJFS85	HBJFS85R	1062	94 - 261	3237	Asn-30 to Ile-35.	
HBJHY72	HBJHY72RP 00B	1063	1 - 297	3238	Gly-1 to Pro-38, Leu-45 to Gly-64.	AR052: 12, AR055: 8, AR053: 8, AR033: 6, AR089: 6, AR061: 6, AR060: 5, AR096: 3,

AR104: 1, AR039: 0
L0794: 5, L0766: 3,
L0759: 3, S0212: 2,
H0318: 2, L0803: 2,
L0804: 2, L0378: 2,
L0665: 2, L0438: 2,
L0439: 2, L0749: 2,
L0591: 2, L0599: 2,
L0362: 2, H0686: 1,
S0342: 1, S0134: 1,
H0656: 1, H0669: 1,
S0358: 1, H0370: 1,
H0069: 1, S0346: 1,
H0251: 1, H0050: 1,
H0373: 1, H0266: 1,
S0022: 1, L0483: 1,
H0553: 1, H0163: 1,
H0090: 1, H0116: 1,
H0509: 1, S0426: 1,
H0529: 1, L0769: 1,
L0638: 1, L0646: 1,
L0648: 1, L0768: 1,
L0381: 1, L0375: 1,
L0653: 1, L0659: 1,
L0782: 1, L0809: 1,
L0793: 1, H0691: 1,
H0435: 1, H0659: 1,
H0648: 1, S0152: 1,
S0390: 1, S0027: 1,
S0028: 1, L0777: 1,

HBJMN13	HBJMN13R	1064	145 - 231	3239	Glu-8 to Asn-13, Arg-16 to Thr-29.	L0731: 1, S0260: 1, L0596: 1, S0192: 1 and S0424: 1.
HBXCG52	HBXCG52R	1065	59 - 547	3240	Lys-23 to Lys-32, Ser-72 to Leu-80, Ser-90 to Gly-95, Leu-98 to His-103, Ser-106 to Gly-113, Ile-121 to Phe-128.	S0280: 1 and S0038: 1.
HBXFO08	HBXFO08R	1066	1 - 126	3241	Leu-2 to Val-10.	
HCACS53	HCACS53RP00A	1067	145 - 543	3242	His-2 to Glu-28, Ala-37 to Gly-45, His-54 to Pro-62, Glu-69 to Thr-77.	
HCHAJ85	HCHAJ85R	1068	171 - 359	3243	Arg-1 to Arg-6, Phe-27 to Arg-32.	
HCHMM71	HCHMM71R	1069	2 - 322	3244		H0651: 9, L0601: 5, H0559: 4, H0494: 4, L0646: 3, H0484: 2, H0255: 2, S0358: 2, H0550: 2, H0309: 2, H0014: 2, H0188: 2, H0617: 2, H0646: 2, L0769: 2, L0644: 2, L0806: 2, H0689: 2, L0750: 2, L0603: 2, H0624: 1, H0171: 1, H0657: 1, H0663: 1,

HCHMW20	HCHMW20R	1070	53 - 319	3245	Ser-1 to Thr-8, Glu-17 to Ala-32, Arg-39 to Trp-47.	S0360: 1, H0574: 1, H0257: 1, H0013: 1, H0635: 1, H0098: 1, H0253: 1, H0327: 1, H0545: 1, H0024: 1, H0181: 1, H0359: 1, S0150: 1, L0369: 1, L0771: 1, L0662: 1, L0766: 1, L0803: 1, L0661: 1, S0428: 1, H0670: 1, S0328: 1, L0748: 1, L0439: 1, L0758: 1 and H0543: 1.
HCLBH21	HCLBH21R	1071	3 - 134	3246		
HCNDT49	HCNDT49R	1072	234 - 443	3247	Gln-17 to Pro-27.	L0439: 8, H0052: 7, L0748: 7, S0440: 5, L0758: 5, H0046: 4, H0038: 4, L0769: 4, S0442: 3, H0013: 3, H0253: 3, T0010: 3, L0774: 3, L0776: 3, H0144: 3, H0521: 3, S0404: 3, L0752: 3, L0731: 3, H0656: 2, S0358: 2, S0360: 2, S0222: 2, H0618: 2, H0620: 2, L0351: 2,

S0422: 2, L0764: 2,   L0771: 2, L0783: 2,   L0793: 2, H0658: 2,   H0666: 2, L0751: 2,   L0754: 2, L0745: 2,   L0747: 2, L0750: 2,   H0624: 1, H0265: 1,   H0556: 1, H0686: 1,   S0134: 1, S0212: 1,   S0001: 1, H0254: 1,   H0661: 1, S0354: 1,   S0444: 1, S0408: 1,   S0300: 1, S0278: 1,   H0369: 1, H0370: 1,   H0333: 1, H0574: 1,   H0486: 1, H0036: 1,   H0263: 1, H0597: 1,   H0545: 1, H0572: 1,   H0024: 1, S0388: 1,   S0051: 1, S0250: 1,   H0252: 1, I10428: 1,   H0039: 1, H0644: 1,   L0055: 1, H0674: 1,   H0135: 1, H0087: 1,   T0067: 1, H0488: 1,   H0529: 1, L0763: 1,   L0770: 1, L0761: 1,   L0374: 1, L0662: 1,   L0768: 1, L0766: 1,   L0803: 1, L0775: 1,

					Mutations	Clone list
HCOMA72	HCOMA72R	1073	25 - 273	3248	Arg-1 to Leu-10, Ser-32 to Ala-45, Ala-58 to Gly-68.	L0805: 1, L0653: 1, L0526: 1, L5622: 1, L0666: 1, L0664: 1, L0665: 1, S0053: 1, H0547: 1, H0682: 1, H0435: 1, H0670: 1, H0660: 1, H0648: 1, H0672: 1, S0328: 1, H0539: 1, S0152: 1, H0696: 1, S0044: 1, S0406: 1, H0631: 1, S3014: 1, S0028: 1, L0742: 1, L0749: 1, L0759: 1, S0436: 1, S0011: 1, S0192: 1, H0542: 1, H0423: 1, S0398: 1 and H0506: 1.
HCOMB04	HCOMB04R	1074	32 - 754	3249	Tyr-3 to Gly-10, Glu-19 to Trp-25.	L0747: 15, L0750: 7, L0731: 7, L0588: 6, L0748: 5, L0439: 5, L0759: 5, H0150: 3, S0144: 3, L0666: 3, L0665: 3, L0752: 3, L0758: 3, L0591: 3, S6024: 2, T0049: 2, S0356: 2, H0674: 2, H0413: 2, S0142: 2.

L0770: 2, L0769: 2,
L0774: 2, L0775: 2,
L0657: 2, H0672: 2,
S0328: 2, S0378: 2,
L0605: 2, L0593: 2,
H0624: 1, T0002: 1,
H0638: 1, S0418: 1,
L0005: 1, S0376: 1,
S0444: 1, S0360: 1,
H0675: 1, S0045: 1,
H0393: 1, S0222: 1,
H0441: 1, H0453: 1,
H0333: 1, H0574: 1,
H0486: 1, H0101: 1,
L0021: 1, H0098: 1,
T0010: 1, H0083: 1,
H0266: 1, H0188: 1,
S0003: 1, H0328: 1,
H0615: 1, H0428: 1,
T0006: 1, H0166: 1,
H0598: 1, H0090: 1,
H0063: 1, T0069: 1,
H0509: 1, H0641: 1,
S0002: 1, L0369: 1,
L0372: 1, L0662: 1,
L0794: 1, L0766: 1,
L0803: 1, L0651: 1,
L0655: 1, L0379: 1,
L0656: 1, L0659: 1,
L0782: 1, L0783: 1,

HCOMD38	HCOMD38R	1075	3 - 275	3250	Pro-1 to Pro-9, Ile-43 to Lys-48.	L0788: 1, L0664: 1, L0565: 1, L0438: 1, H0547: 1, S0126: 1, H0435: 1, H0659: 1, H0658: 1, H0670: 1, H0522: 1, H0696: 1, L0740: 1, L0751: 1, L0745: 1, L0755: 1, L0757: 1, H0445: 1, H0343: 1, H0595: 1, L0596: 1, L0581: 1, L0599: 1 and S0192: 1.
HCOMD61	HCOMD61R	1076	1 - 315	3251		
HCOMF10	HCOMF10R	1077	350 - 622	3252	Asn-10 to Val-16.	L0740: 6, L0666: 2, H0547: 2, L0751: 2, L0777: 2, H0483: 1, S0358: 1, S0444: 1, H0038: 1, L0770: 1, L0768: 1, L0774: 1, L0805: 1, L0658: 1, L0789: 1, H0520: 1, H0659: 1, H0670: 1, L0747: 1, L0779: 1 and L0758: 1.
HCOMF52	HCOMF52R	1078	2 - 523	3253	Lys-11 to Thr-16, Arg-18 to Glu-24, Arg-31 to Leu-38, Phe-51 to Glu-56.	L0439: 7, L0748: 5, H0255: 4, H0253: 4, H0012: 3, H0620: 3, H0617: 3, L0783: 3,

Glu-59 to Glu-67, Thr-102 to Thr-114, Leu-119 to Gln-124.	L0438: 3, H0618: 2, H0046: 2, L0769: 2, L0766: 2, L0532: 2, L0663: 2, H0521: 2, L0750: 2, L0777: 2, L0592: 2, H0543: 2, L0650: 1, S0212: 1, S0001: 1, H0483: 1, H0254: 1, H0638: 1, S0418: 1, S0358: 1, H0580: 1, S0468: 1, H0549: 1, H0559: 1, H0013: 1, S0280: 1, H0318: 1, H0052: 1, H0024: 1, H0252: 1, H0424: 1, H0553: 1, H0644: 1, H0124: 1, H0376: 1, H0135: 1, H0040: 1, H0087: 1, H0488: 1, T0042: 1, H0494: 1, H0509: 1, L0768: 1, L0388: 1, L0657: 1, L0659: 1, L0789: 1, L0352: 1, S0126: 1, H0689: 1, H0658: 1, H0670: 1, H0436: 1, H0478: 1, H0626: 1, L0742: 1, L0780: 1, L0731: 1, L0445: 1, L0608: 1

HCOMG28	HCOMG28R	1079	46 - 357	3254	Lys-1 to Arg-8, Asp-20 to Thr-26, Gly-35 to Glu-48, Leu-66 to Arg-72, Phe-83 to Tyr-88.	L0366: 1 and S0276: 1.
HCOMG40	HCOMG40R	1080	29 - 373	3255	Trp-13 to Asp-19, Cys-29 to Gln-34, Ala-41 to Arg-52, Gly-54 to Gln-59, Arg-69 to Tyr-83.	
HCOMG82	HCOMG82R	1081	233 - 436	3256		
HCOMH70	HCOMH70R	1082	21 - 167	3257	Pro-13 to Pro-22.	H0670: 14, S0360: 9, L0657: 5, L0659: 4, L0809: 4, H0696: 4, L0777: 4, S0356: 3, L0764: 3, L0662: 3, S0374: 3, H0637: 2, H0411: 2, H0486: 2, L0762: 2, L0763: 2, L0521: 2, L0768: 2, L0774: 2, L0805: 2, L0666: 2, L0665: 2, H0659: 2, H0672: 2, H0710: 2, S0406: 2, L0744: 2, L0748: 2, H0686: 1, S0040: 1, H0713: 1, H0657: 1, H0662: 1, S0444: 1, S0408: 1, S0410: 1,

HCOMI30	HCOMI30R	1083	42 - 497	3258		H0602: 1, H0643: 1, T0048: 1, H0263: 1, H0596: 1, H0014: 1, H0015: 1, H0594: 1, H0271: 1, H0687: 1, S0003: 1, S0214: 1, H0169: 1, H0674: 1, S0450: 1, H0649: 1, L0640: 1, L0646: 1, L0641: 1, L0773: 1, L0648: 1, L0388: 1, L0784: 1, L0806: 1, L0776: 1, L0655: 1, L0519: 1, L0530: 1, H0547: 1, H0689: 1, H0435: 1, H0648: 1, S0328: 1, S0330: 1, H0555: 1, H0627: 1, S0390: 1, S0028: 1, L0751: 1, L0779: 1, L0731: 1, L0434: 1, L0581: 1, L0362: 1 and H0667: 1.	
HCOMI37	HCOMI37R	1084	244 - 618	3259			
HCOMLI1	HCOMLI1R	1085	255 - 605	3260	Lys-1 to Gly-10, Pro-13 to Asn-23.		
HCOMM12	HCOMM12R	1086	138 - 338	3261			L0743: 19, L0731: 13, L0744: 12, L0748: 11, L0666: 9, L0751: 9,

L0664: 8, H0144: 8,
H0333: 7, H0617: 7,
L0769: 7, L0662: 7,
S0022: 6, H0616: 6,
H0087: 6, L0483: 5,
H0181: 5, L0517: 5,
L0519: 5, L0754: 5,
H0677: 5, S0051: 4,
S0344: 4, L0663: 4,
H0658: 4, L0747: 4,
L0750: 4, L0757: 4,
H0295: 3, T0049: 3,
H0255: 3, L0622: 3,
T0039: 3, H0253: 3,
H0545: 3, L0163: 3,
H0594: 3, H0188: 3,
H0673: 3, H0100: 3,
S0142: 3, L0372: 3,
L0775: 3, L0776: 3,
L0657: 3, L0382: 3,
L0665: 3, H0672: 3,
S0027: 3, L0742: 3,
L0752: 3, S0260: 3,
H0445: 3, L0596: 3,
L0588: 3, L0599: 3,
S0420: 2, H0637: 2,
S0045: 2, S0132: 2,
S0300: 2, S0278: 2,
S0222: 2, H0431: 2,
H0392: 2, H0599: 2,

H0575: 2, H0052: 2,
H0309: 2, H0085: 2,
H0597: 2, H0544: 2,
H0428: 2, H0124: 2,
S0036: 2, H0163: 2,
H0038: 2, H0413: 2,
H0529: 2, L0369: 2,
L0763: 2, L0770: 2,
L0638: 2, L0764: 2,
L0771: 2, L0803: 2,
L0804: 2, L0375: 2,
L0655: 2, L0384: 2,
L0809: 2, L0532: 2,
S0374: 2, S0126: 2,
H0670: 2, H0651: 2,
H0521: 2, S0028: 2,
L0740: 2, L0485: 2,
L0362: 2, L0601: 2,
S0192: 2, S0424: 2,
L0600: 2, H0556: 1,
T0002: 1, H0686: 1,
S0040: 1, S0342: 1,
H0294: 1, S0114: 1,
S0134: 1, H0650: 1,
H0657: 1, L0785: 1,
H0341: 1, S0180: 1,
S0212: 1, H0484: 1,
H0483: 1, H0254: 1,
H0671: 1, H0662: 1,
H0402: 1, H0638: 1,

S0418: 1, S0356: 1,
T0007: 1, S0358: 1,
S0007: 1, H0208: 1,
H0441: 1, H0438: 1,
H0587: 1, S0005: 1,
L0623: 1, L0477: 1,
T0114: 1, S0280: 1,
L0021: 1, H0590: 1,
H0004: 1, H0618: 1,
S0010: 1, H0318: 1,
S0049: 1, H0251: 1,
H0596: 1, T0110: 1,
H0327: 1, H0009: 1,
H0123: 1, L0471: 1,
H0006: 1, H0014: 1,
H0051: 1, S0388: 1,
H0510: 1, S0334: 1,
H0687: 1, T0023: 1,
T0006: 1, H0424: 1,
H0182: 1, H0606: 1,
H0383: 1, H0165: 1,
H0166: 1, S0366: 1,
H0135: 1, H0090: 1,
T0067: 1, H0488: 1,
H0412: 1, T0069: 1,
S0112: 1, L0564: 1,
H0494: 1, S0015: 1,
H0561: 1, L0762: 1,
L0640: 1, L0637: 1,
L0761: 1, L0667: 1,

L0772: 1, L0373: 1,
L0646: 1, L0643: 1,
L0374: 1, L0765: 1,
L0773: 1, L0648: 1,
L0521: 1, L0768: 1,
L0364: 1, L0533: 1,
L0650: 1, L0774: 1,
L0376: 1, L0806: 1,
L0652: 1, L0653: 1,
L0606: 1, L0629: 1,
L0659: 1, L0636: 1,
L0542: 1, L0526: 1,
L0518: 1, L0782: 1,
L0783: 1, H0689: 1,
H0690: 1, H0682: 1,
H0683: 1, H0659: 1,
H0660: 1, S0328: 1,
S0330: 1, S0380: 1,
H0522: 1, S0004: 1,
H0555: 1, L0611: 1,
S3014: 1, S0206: 1,
L0755: 1, L0758: 1,
H0444: 1, L0587: 1,
L0589: 1, L0605: 1,
L0591: 1, L0608: 1,
L0361: 1, L0366: 1,
H0665: 1, S0242: 1,
S0194: 1, H0543: 1,
H0423: 1, S0460: 1,
S0456: 1 and H0506: 1.

HCOMM55	HCOMM55R	1087	298 - 119	3262	Pro-10 to Leu-20, His-27 to Lys-40,	
HCOMO58	HCOMO58R	1088	1 - 336	3263	Phe-7 to Asp-29, Glu-31 to Lys-38, Thr-46 to Thr-52, Glu-65 to Arg-72.	
HCOMW52	HCOMW52RP00B	1089	3 - 443	3264		
HCOMX77	HCOMX77R	1090	166 - 492	3265		
HCONC18	HCONC18RP00B	1091	3 - 161	3266		
HCONH28	HCONH28R	1092	76 - 267	3267		L0754: 3, H0624: 2, S0354: 2, H0124: 2, L0766: 2, L0751: 2, L0759: 2, S0116: 1, H0661: 1, H0098: 1, H0597: 1, L0157: 1, S0250: 1, S0003: 1, H0622: 1, H0553: 1, H0509: 1, L0521: 1, L0662: 1, L0768: 1, L0803: 1, L0657: 1, L0659: 1, L0666: 1, L0663: 1, H0144: 1, S0126: 1, H0670: 1, L0779: 1, L0777: 1, L0755: 1, L0589: 1 and L0362: 1.
HCONK56	HCONK56R	1093	8 - 718	3268		
HCONK75	HCONK75R	1094	33 - 398	3269		

HCONL49	HCONL49R	1095	3 - 221	3270		
HCONL59	HCONL59R	1096	255 - 455	3271	His-23 to Lys-34, Arg-49 to Leu-57, Pro-59 to Ser-66.	L0748: 50, L0754: 42, L0731: 31, H0644: 30, L0747: 29, H0551: 22, S0418: 21, L0659: 17, H0619: 15, L0663: 14, L0666: 13, S0360: 10, H0622: 10, H0031: 10, H0553: 10, L0662: 10, S0126: 10, L0757: 10, L0603: 10, S0420: 8, H0486: 8, H0013: 8, H0050: 8, H0623: 8, L0717: 7, H0144: 7, L0770: 6, L0750: 6, H0427: 5, H0024: 5, H0328: 5, H0030: 5, L0773: 5, L0665: 5, L0749: 5, H0713: 4, T0039: 4, S0280: 4, H0012: 4, H0038: 4, L0794: 4, L0774: 4, L0775: 4, L0805: 4, H0624: 3, H0170: 3, H0171: 3, S0356: 3, H0329: 3, S0046: 3, H0331: 3, H0575: 3, L0471: 3, H0620: 3,

S0250: 3, H0032: 3,
H0591: 3, L0598: 3,
L0803: 3, L0653: 3,
L0657: 3, H0670: 3,
S0406: 3, H0555: 3,
L0780: 3, L0605: 3,
H0667: 3, H0717: 2,
T0049: 2, S0212: 2,
H0661: 2, S0376: 2,
S0007: 2, H0208: 2,
S0476: 2, H0645: 2,
H0411: 2, H0437: 2,
H0550: 2, H0586: 2,
H0333: 2, H0599: 2,
H0042: 2, H0545: 2,
H0123: 2, H0105: 2,
H0014: 2, H0051: 2,
H0375: 2, L0142: 2,
H0598: 2, H0135: 2,
H0040: 2, S0372: 2,
L0520: 2, L0640: 2,
L0769: 2, L5566: 2,
L0772: 2, L0646: 2,
L0771: 2, L0363: 2,
L0768: 2, L0375: 2,
L0654: 2, L0776: 2,
L0809: 2, L0438: 2,
H0547: 2, H0519: 2,
L0602: 2, L0743: 2,
L0744: 2, L0439: 2,

L0758: 2, L0759: 2,
L0588: 2, L0599: 2,
L0361: 2, H0716: 1,
H0294: 1, S0430: 1,
S0298: 1, S0132: 1,
H0351: 1, H0369: 1,
S0222: 1, H0370: 1,
H0392: 1, H0409: 1,
H0587: 1, H0574: 1,
H0485: 1, T0040: 1,
T0060: 1, H0244: 1,
L0021: 1, H0003: 1,
H0036: 1, H0274: 1,
H0253: 1, H0505: 1,
H0251: 1, H0544: 1,
H0546: 1, H0046: 1,
H0081: 1, H0019: 1,
T0003: 1, H0057: 1,
H0015: 1, H0373: 1,
H0275: 1, H0594: 1,
S0003: 1, H0039: 1,
H0111: 1, H0674: 1,
S0364: 1, S0036: 1,
H0090: 1, H0063: 1,
H0087: 1, H0268: 1,
H0412: 1, H0059: 1,
H0100: 1, L0564: 1,
H0561: 1, S0210: 1,
L0369: 1, L3904: 1,
L0800: 1, L0641: 1,

| HCONL67 | HCONL67R | 1097 | 389 - 631 | 3272 | Leu-2 to Leu-9. | L0764: 1, L5564: 1, L0804: 1, L0378: 1, L0806: 1, L0807: 1, L0526: 1, L0787: 1, L0788: 1, L0791: 1, L0793: 1, S0374: 1, H0691: 1, T0068: 1, H0690: 1, H0682: 1, H0684: 1, H0658: 1, H0672: 1, H0651: 1, H0518: 1, H0696: 1, S0146: 1, S0037: 1, S3014: 1, S0027: 1, S0028: 1, S0206: 1, S0032: 1, H0445: 1, L0589: 1, L0590: 1, L0485: 1, L0604: 1, H0668: 1, H0653: 1, S0242: 1, S0194: 1 and H0008: 1. | L0748: 50, L0754: 42, L0731: 31, H0644: 30, L0747: 29, H0551: 22, S0418: 21, L0659: 17, H0619: 15, L0663: 14, L0666: 13, S0360: 10, H0622: 10, H0031: 10, H0553: 10, L0662: 10, S0126: 10, L0757: 10, L0603: 10, S0420: 8. |

H0486: 8, H0013: 8,
H0050: 8, H0623: 8,
L0717: 7, H0144: 7,
L0770: 6, L0750: 6,
H0427: 5, H0024: 5,
H0328: 5, H0030: 5,
L0773: 5, L0665: 5,
L0749: 5, H0713: 4,
T0039: 4, S0280: 4,
H0012: 4, H0038: 4,
L0794: 4, L0774: 4,
L0775: 4, L0805: 4,
H0624: 3, H0170: 3,
H0171: 3, S0356: 3,
H0329: 3, S0046: 3,
H0331: 3, H0575: 3,
L0471: 3, H0620: 3,
S0250: 3, H0032: 3,
H0591: 3, L0598: 3,
L0803: 3, L0653: 3,
L0657: 3, H0670: 3,
S0406: 3, H0555: 3,
L0780: 3, L0605: 3,
H0667: 3, H0717: 2,
T0049: 2, S0212: 2,
H0661: 2, S0376: 2,
S0007: 2, H0208: 2,
S0476: 2, H0645: 2,
H0411: 2, H0437: 2,
H0550: 2, H0586: 2,

H0333: 2, H0599: 2,
H0042: 2, H0545: 2,
H0123: 2, H0105: 2,
H0014: 2, H0051: 2,
H0375: 2, L0142: 2,
H0598: 2, H0135: 2,
H0040: 2, S0372: 2,
L0520: 2, L0640: 2,
L0769: 2, L5566: 2,
L0772: 2, L0646: 2,
L0771: 2, L0363: 2,
L0768: 2, L0375: 2,
L0654: 2, L0776: 2,
L0809: 2, L0438: 2,
H0547: 2, H0519: 2,
L0602: 2, L0743: 2,
L0744: 2, L0439: 2,
L0758: 2, L0759: 2,
L0588: 2, L0599: 2,
L0361: 2, H0716: 1,
H0294: 1, S0430: 1,
S0298: 1, S0132: 1,
H0351: 1, H0369: 1,
S0222: 1, H0370: 1,
H0392: 1, H0409: 1,
H0587: 1, H0574: 1,
H0485: 1, T0040: 1,
T0060: 1, H0244: 1,
L0021: 1, H0003: 1,
H0036: 1, H0274: 1,

H0253: 1, H0505: 1,
H0251: 1, H0544: 1,
H0546: 1, H0046: 1,
H0081: 1, H0019: 1,
T0003: 1, H0057: 1,
H0015: 1, H0373: 1,
H0275: 1, H0594: 1,
S0003: 1, H0039: 1,
H0111: 1, H0674: 1,
S0364: 1, S0036: 1,
H0090: 1, H0063: 1,
H0087: 1, H0268: 1,
H0412: 1, H0059: 1,
H0100: 1, L0564: 1,
H0561: 1, S0210: 1,
L0369: 1, L3904: 1,
L0800: 1, L0641: 1,
L0764: 1, L5564: 1,
L0804: 1, L0378: 1,
L0806: 1, L0807: 1,
L0526: 1, L0787: 1,
L0788: 1, L0791: 1,
L0793: 1, S0374: 1,
H0691: 1, T0068: 1,
H0690: 1, H0682: 1,
H0684: 1, H0658: 1,
H0672: 1, H0651: 1,
H0518: 1, H0696: 1,
S0146: 1, S0037: 1,
S3014: 1, S0027: 1,

HCONN92	HCONN92R	1098	205 - 384	3273	S0028: 1, S0206: 1, S0032: 1, H0445: 1, L0589: 1, L0590: 1, L0485: 1, L0604: 1, H0668: 1, H0653: 1, S0242: 1, S0194: 1 and H0008: 1.
HCONO17	HCONO17R	1099	1 - 135	3274	
HCONO25	HCONO25R	1100	218 - 610	3275	L0803: 15, L0766: 7, L0748: 6, L0809: 5, L0749: 5, L0804: 4, L0776: 4, L0754: 4, L0752: 4, L0805: 3, L0755: 3, S0438: 2, L0800: 2, L0662: 2, L0740: 2, L0751: 2, L0747: 2, L0750: 2, L0757: 2, L0615: 1, H0556: 1, S0278: 1, T0039: 1, H0318: 1, H0597: 1, H0009: 1, H0510: 1, H0553: 1, H0063: 1, H0509: 1, H0647: 1, S0144: 1, L0763: 1, L0770: 1, L0764: 1, L0768: 1, L0794: 1, L0775: 1, L0653: 1, L0661: 1, L0518: 1, L0790: 1,

HCONP44	HCONP44R	1101	3 - 413	3276	Val-1 to Ile-10, Met-32 to Asn-42.	H0519: 1, H0659: 1, H0670: 1, S0328: 1, H0696: 1, L0439: 1, L0581: 1, S0242: 1 and S0276: 1.
HCONQ67	HCONQ67R	1102	1 - 669	3277	Gly-7 to Gly-21, Pro-145 to Arg-152, Ala-178 to Lys-183.	
HCONQ71	HCONQ71R	1103	312 - 488	3278		
HCONR31	HCONR31R	1104	3 - 380	3279	Gly-18 to Gln-39, Leu-49 to His-60, Glu-67 to Asp-92.	
HCONU03	HCONU03R	1105	3 - 575	3280		
HCONW62	HCONW62R	1106	1 - 429	3281	Thr-76 to Arg-92, Pro-113 to Ala-118.	
HCONW74	HCONW74R	1107	85 - 234	3282	Pro-15 to Tyr-21.	
HCONW90	HCONW90R	1108	2 - 151	3283	Asn-1 to Pro-10.	
HCONW95	HCONW95R	1109	44 - 457	3284		
HCOOB60	HCOOB60R	1110	101 - 352	3285		
HCOOG32	HCOOG32R	1111	2 - 334	3286		
HCOOG37	HCOOG37R	1112	3 - 482	3287		
HCOOH93	HCOOH93R	1113	1 - 426	3288		
HCOOI71	HCOOI71R	1114	1 - 354	3289	Ala-15 to Gln-25, Gly-42 to Asp-51, Gln-82 to Lys-87, Lys-113 to Lys-118.	
HCOOI79	HCOOI79R	1115	209 - 625	3290		

HCOOMI18						
	HCOOMI18R	1116	2 - 694	3291	Lys-71 to Glu-76, Ala-95 to Asp-100, Asp-113 to Ser-134.	
HCOOMI73						
	HCOOMI73R	1117	2 - 661	3292	Leu-33 to Lys-39.	H0012: 5, H0620: 4, H0622: 4, L0803: 4, H0670: 4, L0751: 4, L0770: 3, S6024: 2, S0222: 2, L0791: 2, L0731: 2, H0549: 1, H0438: 1, T0023: 1, H0477: 1, H0647: 1, L0648: 1, L0774: 1, L0659: 1, L0664: 1, L0665: 1, H0659: 1, H0658: 1, H0648: 1, H0651: 1, S0380: 1, L0748: 1, L0439: 1, L0756: 1, L0779: 1 and L0755: 1.
HCOOQ46	HCOOQ46R	1118	2 - 166	3293		
HCOOS39	HCOOS39R	1119	2 - 229	3294		
HCOOT43	HCOOT43R	1120	2 - 439	3295		L0743: 19, L0731: 13, L0744: 12, L0748: 11, L0666: 9, L0751: 9, L0664: 8, H0144: 8, H0333: 7, H0617: 7, L0769: 7, L0662: 7, S0022: 6, H0616: 6, H0087: 6, L0483: 5, H0181: 5, L0517: 5,

L0519: 5, L0754: 5,
H0677: 5, S0051: 4,
S0344: 4, L0663: 4,
H0658: 4, L0747: 4,
L0750: 4, L0757: 4,
H0295: 3, T0049: 3,
H0255: 3, L0622: 3,
T0039: 3, H0253: 3,
H0545: 3, L0163: 3,
H0594: 3, H0188: 3,
H0673: 3, H0100: 3,
S0142: 3, L0372: 3,
L0775: 3, L0776: 3,
L0657: 3, L0382: 3,
L0665: 3, H0672: 3,
S0027: 3, L0742: 3,
L0752: 3, S0260: 3,
H0445: 3, L0596: 3,
L0588: 3, L0599: 3,
S0420: 2, H0637: 2,
S0045: 2, S0132: 2,
S0300: 2, S0278: 2,
S0222: 2, H0431: 2,
H0392: 2, H0599: 2,
H0575: 2, H0052: 2,
H0309: 2, H0085: 2,
H0597: 2, H0544: 2,
H0428: 2, H0124: 2,
S0036: 2, H0163: 2,
H0038: 2, H0413: 2,

H0529: 2, L0369: 2,
L0763: 2, L0770: 2,
L0638: 2, L0764: 2,
L0771: 2, L0803: 2,
L0804: 2, L0375: 2,
L0655: 2, L0384: 2,
L0809: 2, L0532: 2,
S0374: 2, S0126: 2,
H0670: 2, H0651: 2,
L0521: 2, S0028: 2,
L0740: 2, L0485: 2,
L0362: 2, L0601: 2,
S0192: 2, S0424: 2,
L0600: 2, H0556: 1,
T0002: 1, H0686: 1,
S0040: 1, S0342: 1,
H0294: 1, S0114: 1,
S0134: 1, H0650: 1,
H0657: 1, L0785: 1,
H0341: 1, S0180: 1,
S0212: 1, H0484: 1,
H0483: 1, H0254: 1,
H0671: 1, H0662: 1,
H0402: 1, H0638: 1,
S0418: 1, S0356: 1,
T0007: 1, S0358: 1,
S0007: 1, H0208: 1,
H0441: 1, H0438: 1,
H0587: 1, S0005: 1,
L0623: 1, L0477: 1,

T0114: 1, S0280: 1,
L0021: 1, H0590: 1,
H0004: 1, H0618: 1,
S0010: 1, H0318: 1,
S0049: 1, H0251: 1,
H0596: 1, T0110: 1,
H0327: 1, H0009: 1,
H0123: 1, L0471: 1,
H0006: 1, H0014: 1,
H0051: 1, S0388: 1,
H0510: 1, S0334: 1,
H0687: 1, T0023: 1,
T0006: 1, H0424: 1,
H0182: 1, H0606: 1,
H0166: 1, H0165: 1,
H0383: 1, S0366: 1,
H0135: 1, H0090: 1,
T0067: 1, H0488: 1,
H0412: 1, T0069: 1,
S0112: 1, L0564: 1,
H0494: 1, S0015: 1,
H0561: 1, L0762: 1,
L0640: 1, L0637: 1,
L0761: 1, L0667: 1,
L0772: 1, L0373: 1,
L0646: 1, L0643: 1,
L0374: 1, L0765: 1,
L0773: 1, L0648: 1,
L0521: 1, L0768: 1,
L0364: 1, L0533: 1,

HCOOT68	HCOOT68R	1121	147 - 488	3296	Arg-13 to Val-20	
					L0748: 20, H0251: 11, L0771: 11, L0740: 11, L0731: 11, L0757: 11, L0752: 10, S0126: 8, H0144: 7, L0596: 6, H0013: 5, L0665: 5.	L0650: 1, L0774: 1, L0376: 1, L0806: 1, L0652: 1, L0653: 1, L0606: 1, L0629: 1, L0659: 1, L0636: 1, L0542: 1, L0526: 1, L0518: 1, L0782: 1, L0783: 1, H0689: 1, H0690: 1, H0682: 1, H0683: 1, H0659: 1, H0660: 1, S0328: 1, S0330: 1, S0380: 1, H0522: 1, S0004: 1, H0555: 1, L0611: 1, S3014: 1, S0206: 1, L0755: 1, L0758: 1, H0444: 1, L0587: 1, L0589: 1, L0605: 1, L0591: 1, L0608: 1, L0361: 1, L0366: 1, H0665: 1, S0242: 1, S0194: 1, H0543: 1, H0423: 1, S0460: 1, S0456: 1 and H0506: 1.

L0747: 5, H0542: 5,
H0423: 5, H0624: 4,
T0002: 4, H0486: 4,
H0031: 4, H0169: 4,
H0616: 4, L0770: 4,
L0776: 4, L0666: 4,
S0152: 4, L0754: 4,
H0657: 3, H0663: 3,
S0418: 3, S0358: 3,
S0360: 3, H0038: 3,
L0764: 3, L0648: 3,
L0775: 3, L0655: 3,
L0749: 3, L0750: 3,
L0755: 3, S0026: 3,
H0422: 2, H0170: 2,
H0171: 2, H0341: 2,
H0402: 2, H0638: 2,
S0045: 2, S0046: 2,
H0156: 2, S0182: 2,
H0318: 2, L0471: 2,
S0003: 2, H0168: 2,
H0674: 2, H0090: 2,
H0063: 2, H0412: 2,
H0413: 2, H0100: 2,
S0440: 2, L0769: 2,
L0372: 2, L0662: 2,
L0659: 2, H0547: 2,
H0659: 2, S0328: 2,
S0380: 2, H0521: 2,
L0756: 2, L0758: 2,

L0759: 2, H0445: 2,
L0605: 2, L0604: 2,
L0595: 2, L0362: 2,
S0194: 2, H0543: 2,
S0040: 1, S0134: 1,
H0583: 1, H0656: 1,
S0116: 1, H0484: 1,
H0177: 1, S0420: 1,
L0005: 1, S0354: 1,
S0408: 1, L0717: 1,
H0369: 1, H0550: 1,
S0222: 1, H0574: 1,
H0632: 1, T0060: 1,
H0250: 1, H0108: 1,
H0575: 1, H0037: 1,
T0048: 1, H0309: 1,
H0596: 1, T0115: 1,
H0597: 1, H0327: 1,
H0046: 1, S0051: 1,
H0083: 1, H0061: 1,
S6028: 1, H0288: 1,
H0292: 1, H0039: 1,
H0553: 1, H0644: 1,
H0111: 1, H0032: 1,
H0383: 1, H0316: 1,
H0598: 1, H0087: 1,
H0059: 1, T0042: 1,
H0560: 1, S0438: 1,
H0509: 1, H0132: 1,
H0641: 1, H0633: 1,

HCOOU56	HCOOU56R	1122	3 - 257	3297	
HCOOW72	HCOOW72R	1123	58 - 534	3298	Ala-20 to Asp-25, Asp-38 to Ser-59, Asn-103 to Glu-109, Pro-111 to Ser-119.
HCOOX01	HCOOX01RA	1124	153 - 311	3299	

S0210: 1, H0529: 1, L0520: 1, L0763: 1, L0637: 1, L0800: 1, L0765: 1, L0773: 1, L0521: 1, L0768: 1, L0364: 1, L0766: 1, L0806: 1, L0653: 1, L0657: 1, L0518: 1, L0783: 1, L0383: 1, L0663: 1, L0664: 1, H0593: 1, H0689: 1, H0682: 1, H0670: 1, H0666: 1, H0648: 1, H0672: 1, L0355: 1, L0522: 1, S0013: 1, H0696: 1, H0134: 1, H0214: 1, S0406: 1, L0609: 1, S3014: 1, S0206: 1, L0744: 1, L0751: 1, H0343: 1, L0591: 1, L0601: 1, S0242: 1, L0697: 1, S0424: 1 and S0446: 1.

| HCOOX07 | HCOOX07R | 1125 | 236 - 367 | 3300 | His-15 to Gly-29. | L0751: 14, L0659: 11, H0695: 10, L0666: 10, L0757: 9, L0743: 8, L0779: 8, H0581: 6, L0769: 6, L0748: 6, L0758: 6, H0556: 5, H0402: 5, S0360: 5, H0014: 5, H0271: 5, L0761: 5, L0667: 5, L0774: 5, L0653: 5, S0406: 5, H0436: 5, S0358: 4, S0132: 4, L0763: 4, L0776: 4, L0809: 4, L0664: 4, S0126: 4, L0731: 4, S0280: 3, H0150: 3, H0887: 3, L0662: 3, L0775: 3, L0375: 3, H0670: 3, L0749: 3, S0434: 3, H0295: 2, H0650: 2, S0408: 2, H0580: 2, H0411: 2, H0586: 2, H0559: 2, H0545: 2, H0050: 2, S0051: 2, H0083: 2, H0416: 2, H0688: 2, H0617: 2, H0063: 2, H0551: 2, S0344: 2, L0643: 2, L0764: 2, L0766: 2, L0649: 2, |

L0806: 2, L0657: 2,
L0647: 2, L0793: 2,
L0665: 2, S0428: 2,
S0332: 2, L0747: 2,
L0752: 2, H0624: 1,
H0171: 1, H0265: 1,
H0159: 1, H0713: 1,
S0218: 1, H0656: 1,
S0116: 1, H0483: 1,
H0663: 1, H0638: 1,
S0356: 1, S0444: 1,
H0339: 1, S0046: 1,
S0476: 1, S0278: 1,
S6022: 1, H0550: 1,
S0414: 1, L0622: 1,
H0486: 1, H0635: 1,
H0427: 1, H0156: 1,
H0599: 1, H0052: 1,
H0309: 1, H0597: 1,
H0546: 1, L0041: 1,
H0123: 1, H0510: 1,
H0188: 1, T0006: 1,
L0055: 1, H0673: 1,
H0674: 1, H0708: 1,
H0316: 1, H0634: 1,
H0087: 1, H0059: 1,
S0352: 1, S0448: 1,
S0306: 1, L0640: 1,
L0371: 1, L0770: 1,
L0638: 1, L5565: 1,

HCOOX48	HCOOX48R	1126	203 - 349	3301	Leu-13 to Gly-21, Ser-27 to Ser-42.	L0646: 1, L0642: 1, L0645: 1, L0771: 1, L0773: 1, L0648: 1, L0794: 1, L0805: 1, L0652: 1, L0661: 1, L0493: 1, L0635: 1, L0384: 1, L0788: 1, L0663: 1, S0052: 1, S0216: 1, S0374: 1, T0068: 1, H0689: 1, H0682: 1, H0659: 1, H0666: 1, H0672: 1, S0330: 1, H0539: 1, H0710: 1, H0521: 1, H0522: 1, H0696: 1, S0190: 1, S0404: 1, H0555: 1, L0744: 1, L0740: 1, L0756: 1, L0777: 1, L0759: 1, S0031: 1, H0595: 1, L0581: 1, L0361: 1 and S0194: 1.
HCOOY43	HCOOY43R	1127	1 - 315	3302	Asn-67 to Arg-73, Thr-96 to Gly-102.	
HCOPA60	HCOPA60RA	1128	3 - 446	3303	Ala-1 to Leu-7, Gly-14 to Arg-19, Tyr-34 to Asp-41.	L0748: 4, L0747: 4, L0779: 4, H0620: 4, L0770: 3, L0774: 3, L0622: 2, S0280: 2.

H0271: 2, H0290: 2, L0769: 2, L0800: 2, L0794: 2, L0766: 2, L0775: 2, H0547: 2, S0126: 2, S0380: 2, L0752: 2, L0758: 2, L0596: 2, H0295: 1, S0212: 1, H0125: 1, H0559: 1, T0060: 1, T0082: 1, H0150: 1, N0006: 1, H0024: 1, S0022: 1, H0688: 1, H0428: 1, T0023: 1, H0033: 1, H0424: 1, H0213: 1, H0412: 1, H0413: 1, H0633: 1, S0344: 1, L0646: 1, L0768: 1, L0804: 1, L0656: 1, L0783: 1, L0809: 1, L0788: 1, L0666: 1, L0663: 1, L0438: 1, H0670: 1, H0660: 1, H0522: 1, S0037: 1, L0439: 1, L0750: 1, L0759: 1, S0031: 1 and S0196: 1.		
Asp-28 to Glu-34, Ala-38 to Ile-44, Ala-64 to Arg-77, Gly-82 to Ala-88.		
3304		
2 - 598		
1129		
HCOPB03R		
HCOPB03		

HCOPC45	HCOPC45R	1130	3 - 89	3305		
HCOPD67	HCOPD67R	1131	26 - 541	3306	Phe-1 to Gly-7.	
HCOPE27	HCOPE27R	1132	2 - 400	3307	Arg-37 to Gly-44, Asp-76 to Gly-87.	L0751: 16, L0601: 10, L0659: 4, H0670: 4, L0665: 3, S0376: 2, H0494: 2, L0758: 2, L0596: 2, H0587: 1, H0646: 1, L0372: 1, L0646: 1, L0662: 1, L0552: 1, L0376: 1, L0806: 1, L0664: 1, H0682: 1, H0435: 1, H0672: 1 and L0744: 1.
HCOPH51	HCOPH51RA	1133	243 - 398	3308		
HCOPI09	HCOPI09RA	1134	2 - 328	3309		
HCOPM42	HCOPM42R	1135	1 - 90	3310		
HCOPO34	HCOPO34R	1136	140 - 361	3311	Thr-6 to Cys-16, Tyr-40 to Lys-47, Ser-61 to Gln-66.	
HCOPO36	HCOPO36R	1137	143 - 601	3312	Arg-1 to Ser-7, Ser-25 to Phe-32, Leu-39 to Ser-44, Arg-58 to Gly-63, Ser-140 to Thr-145.	L0665: 3, H0682: 2, H0435: 2, L0751: 2, H0663: 1, L0021: 1, H0647: 1, L0806: 1, L0664: 1, H0683: 1, H0670: 1 and H0660: 1.
HCOPO88	HCOPO88R	1138	1 - 267	3313	Pro-7 to Phe-15, Gly-26 to Arg-31, Asp-35 to Glu-43.	
HCOPV41	HCOPV41R	1139	3 - 620	3314	Arg-4 to Lys-9.	

HCOPZI5	HCOPZI5R	1140	1 - 582	3315	Asp-61 to Asn-67, Thr-69 to Lys-75, Leu-105 to Ala-112, Gly-126 to His-134, Gly-172 to Glu-179, Pro-186 to Asn-199.	AR096: 11, AR061: 10, AR104: 5, AR060: 5, AR089: 5, AR055: 4 L0774: 3, S0358: 2, H0509: 2, L0809: 2, H0670: 2, L0745: 2, L0779: 2, L0752: 2, H0449: 1, T0048: 1, H0355: 1, H0428: 1, H0617: 1, S0438: 1, H0529: 1, L0770: 1, L0761: 1, L0773: 1, L0803: 1, L0804: 1, L0375: 1, L0659: 1, L0382: 1, L0791: 1, S0328: 1, H0134: 1, L0743: 1, L0748: 1, L0747: 1 and L0756: 1.
HCOQA38	HCOQA38R	1141	41 - 271	3316	His-39 to Asn-45, Cys-68 to Cys-75.	
HCOQA80	HCOQA80R	1142	1 - 192	3317	His-37 to Asp-42.	
HCOQB12	HCOQB12R	1143	1 - 582	3318	Lys-6 to Asp-11, Gly-22 to Phe-27,	

HCOQB56	HCOQB56R	1144	1 - 66	3319	His-54 to Gly-63, Asp-73 to Lys-79.	H0670: 2 and H0589: 1.
HCOQB58	HCOQB58R	1145	281 - 466	3320	Lys-1 to Gln-7.	
HCOQC71	HCOQC71R	1146	3 - 248	3321	Lys-1 to Asp-21, Lys-61 to Leu-71.	L0794: 7, L0803: 5, L0809: 5, L0666: 5, L0751: 5, L0759: 3, H0674: 2, L0768: 2, L0774: 2, L0663: 2, L0779: 2, L0758: 2, S0360: 1, H0455: 1, H0618: 1, H0263: 1, H0169: 1, H0616: 1, H0059: 1, S0112: 1, L0451: 1, L0770: 1, L0639: 1, L0648: 1, L0804: 1, L0776: 1, L0783: 1, L0789: 1, L0790: 1, L0791: 1, L0664: 1, L0665: 1, H0670: 1, H0672: 1 and L0608: 1.
HCOQD29	HCOQD29R	1147	1 - 570	3322	Glu-66 to Arg-72, Pro-148 to Ser-154.	
HCOQD38	HCOQD38R	1148	106 - 639	3323	Met-3 to Ser-16, Cys-25 to Asp-35, Glu-42 to Lys-52, Ser-55 to Glu-63, Glu-74 to Thr-79,	

| HCOQD49 | HCOQD49R | 1149 | 8 - 196 | 3324 | Asp-39 to Ser-46. | Ile-81 to Ser-102, Ser-109 to Glu-118, Thr-138 to Glu-158. | S0358: 15, S0003: 13, S0126: 11, L0754: 11, S0410: 10, H0599: 9, S0440: 9, H0529: 9, L0748: 9, H0341: 8, H0373: 8, H0591: 8, L0588: 8, L0362: 8, H0661: 7, S0007: 7, L0471: 7, L0731: 7, H0170: 6, T0042: 6, S0374: 6, H0624: 5, S0408: 5, H0013: 5, H0046: 5, H0031: 5, H0551: 5, H0144: 5, L0752: 5, H0657: 4, S0346: 4, S0214: 4, H0039: 4, H0644: 4, H0616: 4, H0413: 4, H0494: 4, H0670: 4, S0404: 4, S3014: 4, L0740: 4, L0747: 4, L0750: 4, L0753: 4, L0758: 4, L0581: 4, S0424: 4, S0040: 3, H0663: 3, H0638: 3, S0356: 3, S0360: 3, S0222: 3, H0497: 3, |

H0575: 3, H0036: 3,
S0010: 3, H0052: 3,
S0438: 3, H0547: 3,
S0328: 3, S0380: 3,
S0206: 3, L0439: 3,
L0757: 3, L0595: 3,
H0423: 3, S0114: 2,
S0116: 2, S0212: 2,
H0484: 2, H0125: 2,
S0418: 2, S0376: 2,
S0444: 2, H0580: 2,
H0393: 2, H0369: 2,
H0370: 2, H0409: 2,
H0331: 2, H0574: 2,
H0486: 2, H0156: 2,
H0042: 2, H0318: 2,
H0581: 2, H0196: 2,
H0012: 2, L0163: 2,
H0083: 2, H0266: 2,
H0328: 2, H0615: 2,
L0194: 2, L0483: 2,
H0673: 2, H0169: 2,
S0364: 2, H0316: 2,
H0090: 2, S0036: 2,
H0598: 2, T0067: 2,
S0150: 2, S0344: 2,
S0422: 2, S0002: 2,
L0762: 2, L0774: 2,
L0665: 2, L0438: 2,
H0659: 2, H0539: 2,

1092

S0152: 2, H0521: 2, H0696: 2, S3012: 2, L0749: 2, L0756: 2, S0434: 2, L0593: 2, L0594: 2, L0366: 2, H0653: 2, H0543: 2, H0506: 2, H0171: 1, H0685: 1, H0716: 1, T0049: 1, S0134: 1, S0218: 1, H0583: 1, H0254: 1, H0255: 1, H0671: 1, H0664: 1, H0305: 1, L0005: 1, S0468: 1, H0208: 1, S0045: 1, S0046: 1, S6026: 1, H0351: 1, H0411: 1, H0261: 1, H0431: 1, H0455: 1, H0586: 1, H0632: 1, T0039: 1, L0586: 1, H0098: 1, H0120: 1, T0048: 1, S0182: 1, S0049: 1, H0230: 1, H0596: 1, T0115: 1, H0546: 1, H0545: 1, H0009: 1, H0178: 1, H0572: 1, H0123: 1, H0024: 1, H0275: 1, T0010: 1, H0239: 1, H0375: 1, H0288: 1,

H0286: 1, H0070: 1,
H0622: 1, T0023: 1,
S0368: 1, T0006: 1,
H0553: 1, H0628: 1,
H0032: 1, H0674: 1,
H0124: 1, H0068: 1,
H0038: 1, H0634: 1,
H0412: 1, H0100: 1,
H0560: 1, H0625: 1,
H0561: 1, H0132: 1,
H0130: 1, H0646: 1,
S0142: 1, H0142: 1,
H0695: 1, L0369: 1,
L0371: 1, L0373: 1,
L0764: 1, L0773: 1,
L0648: 1, L0521: 1,
L0649: 1, L0784: 1,
L0776: 1, L0558: 1,
L0382: 1, L0787: 1,
L0792: 1, L0664: 1,
L0665: 1, H0520: 1,
H0519: 1, H0593: 1,
H0689: 1, H0683: 1,
H0684: 1, H0435: 1,
H0560: 1, H0648: 1,
S0330: 1, H0710: 1,
H0522: 1, S0044: 1,
S0146: 1, S0406: 1,
H0555: 1, H0436: 1,
H0047: 1, H0627: 1,

HCOQF77	HCOQF77R	1150	1 - 357	3325		H0444: 1, H0595: 1, L0608: 1, S0011: 1, H0668: 1, S0026: 1, H0136: 1, H0542: 1 and H0422: 1.
HCOQG37	HCOQG37R	1151	3 - 395	3326	Pro-26 to Asn-34, Pro-50 to Pro-56, Arg-64 to Val-69, Val-97 to Lys-103.	
HCOQG47	HCOQG47R	1152	208 - 522	3327		
HCOQH46	HCOQH46R	1153	2 - 583	3328		
HCOQI14	HCOQI14R	1154	11 - 187	3329	Arg-10 to Ser-16.	L0777: 9, L0766: 5, L0748: 3, L0439: 3, H0599: 2, L0774: 2, L0747: 2, L0749: 2, L0779: 2, L0731: 2, H0305: 1, L0534: 1, H0675: 1, S0046: 1, H0004: 1, H0083: 1, L0456: 1, T0042: 1, S0344: 1, S0002: 1, L0369: 1, L0770: 1, L0773: 1, L0803: 1, L0776: 1, L0809: 1, L0791: 1, H0658: 1, H0670: 1, S3012: 1, L0756: 1, L0780: 1 and L0759: 1.
HCOQI67	HCOQI67R	1155	1 - 126	3330		

HCOQJ06	HCOQJ06R	1156	8 - 457	3331		
HCOQJ07	HCOQJ07R	1157	3 - 707	3332		
HCOQJ36	HCOQJ36R	1158	149 - 328	3333		L0752: 4, H0156: 2, L0803: 2, L0776: 2, H0648: 2, L0439: 2, H0431: 1, H0575: 1, H0014: 1, T0023: 1, H0598: 1, H0591: 1, H0059: 1, L0772: 1, L0372: 1, L0764: 1, L0771: 1, L0773: 1, L0804: 1, L0774: 1, L0775: 1, L0375: 1, L0805: 1, L0629: 1, L0789: 1, L0665: 1, L0438: 1, H0658: 1, H0670: 1 and L0779: 1.
HCOQJ79	HCOQJ79R	1159	1 - 471	3334		
HCOQK86	HCOQK86R	1160	1 - 519	3335		
HCOQL87	HCOQL87R	1161	3 - 398	3336		
HCOQM87	HCOQM87R	1162	3 - 143	3337	Arg-1 to Val-23.	
HCOQO79	HCOQO79R	1163	2 - 613	3338	Phe-94 to Gln-102, Gln-133 to Thr-140.	
HCOQP32	HCOQP32R	1164	3 - 149	3339		
HCOQS11	HCOQS11R	1165	75 - 443	3340		
HCOQU15	HCOQU15R	1166	2 - 430	3341	Asn-29 to Gly-38, Glu-50 to Gln-58.	L0665: 4, L0743: 4, H0486: 3, H0123: 3, H0024: 3, L0528: 3, L0748: 3, H0170: 2,

| HCOQU92 | HCOQU92R | 1167 | 46 - 315 | 3342 | Ile-3 to Arg-8, Pro-17 to Ser-22, | H0050: 2, L0769: 2, H0670: 2, L0747: 2, L0750: 2, H0171: 1, H0556: 1, H0583: 1, H0657: 1, S0212: 1, H0208: 1, H0619: 1, S0278: 1, H0550: 1, S0222: 1, H0438: 1, H0613: 1, H0331: 1, H0013: 1, H0635: 1, H0002: 1, S0474: 1, H0581: 1, H0009: 1, L0157: 1, H0012: 1, S0025: 1, H0239: 1, H0375: 1, H0266: 1, H0598: 1, H0135: 1, H0163: 1, H0087: 1, H0551: 1, H0494: 1, S0210: 1, L0640: 1, L0763: 1, L0646: 1, L0387: 1, L0766: 1, L0805: 1, L0776: 1, L0655: 1, L0657: 1, H0144: 1, H0520: 1, H0547: 1, H0519: 1, H0689: 1, H0658: 1, H0576: 1, L0779: 1 and L0759: 1. | L0805: 7, L0776: 4, L0748: 4, H0545: 3, |

Ser-28 to Ser-34, Thr-45 to Thr-56, Ser-58 to Thr-63, Tyr-74 to Thr-79.	S0438: 3, H0641: 3, L0588: 3, L0592: 3, T0049: 2, H0549: 2, H0431: 2, H0486: 2, L0471: 2, H0169: 2, S0372: 2, L0520: 2, L0553: 2, L0768: 2, L0649: 2, L0655: 2, L0527: 2, L0783: 2, L0532: 2, H0144: 2, H0682: 2, H0670: 2, S0378: 2, S0406: 2, L0750: 2, S0026: 2, H0542: 2, H0170: 1, H0716: 1, S0212: 1, H0638: 1, H0125: 1, S0444: 1, H0580: 1, H0393: 1, H0411: 1, H0587: 1, L0586: 1, T0114: 1, H0390: 1, T0048: 1, H0318: 1, H0596: 1, H0620: 1, H0375: 1, T0006: 1, H0606: 1, H0429: 1, S0294: 1, H0386: 1, L0770: 1, L0769: 1, L3904: 1, L0374: 1, L0773: 1, L0662: 1, L0766: 1, L0803: 1, L0774: 1, L0526: 1,

	HCOQV27	HCOQV27R	1168	3 - 239	3343	Glu-1 to Lys-17, Val-25 to Asn-30, Phe-36 to Pro-42.	L0809: 1, L0793: 1, L0664: 1, S0053: 1, H0689: 1, H0684: 1, H0659: 1, H0658: 1, H0648: 1, S0330: 1, H0521: 1, H0522: 1, S0404: 1, L0749: 1, L0780: 1, L0731: 1 and H0543: 1.	H0250: 35, L0770: 9, H0635: 6, L0483: 6, L0766: 6, H0521: 6, L0745: 6, S0003: 5, H0623: 5, L0776: 5, H0445: 5, S0408: 4, H0411: 4, H0634: 4, H0641: 4, L0598: 4, H0650: 3, H0656: 3, S0360: 3, H0574: 3, H0486: 3, H0373: 3, H0687: 3, H0591: 3, H0040: 3, L0662: 3, L0775: 3, L0665: 3, S0216: 3, L0748: 3, L0777: 3, S0134: 2, H0663: 2, S0007: 2, H0550: 2, H0013: 2, H0581: 2, H0510: 2, S0214: 2, H0615: 2, H0674: 2, S0440: 2,

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HCOQX38	HCOQX38R	1169	23 - 439	3344	Trp-2 to Gly-7.	S0366: 1, H0087: 1, T0067: 1, H0100: 1, S0294: 1, H0633: 1, H0649: 1, S0422: 1, UNKWN: 1, L0667: 1, L0641: 1, L0764: 1, L0794: 1, L0649: 1, L0774: 1, L0784: 1, L0805: 1, L0657: 1, L0659: 1, L0791: 1, L0792: 1, L0664: 1, S0052: 1, S0428: 1, H0699: 1, H0703: 1, H0693: 1, L0438: 1, H0547: 1, H0593: 1, H0659: 1, H0670: 1, H0522: 1, S0013: 1, H0555: 1, H0436: 1, H0576: 1, H0478: 1, S3014: 1, L0740: 1, L0746: 1, L0758: 1, L0588: 1, L0595: 1, L0361: 1, S0026: 1, S0242: 1, S0194: 1 and H0352: 1.
HCOQY33	HCOQY33R	1170	1 - 321	3345		
HCOQY43	HCOQY43R	1171	271 - 510	3346		S0282: 1, L0021: 1, S0438: 1, L0775: 1, L0666: 1, L0663: 1,

HCOQ202	HCOQ202R	1172	387 - 473	3347	Lys-1 to Lys-13.
HCOQ286	HCOQ286R	1173	1 - 507	3348	
HCORA95	HCORA95R	1174	2 - 136	3349	Pro-1 to Phe-15..
HCORB20	HCORB20R	1175	14 - 292	3350	Val-1 to Gly-9.
HCORB43	HCORB43R	1176	1 - 303	3351	
HCORB66	HCORB66R	1177	3 - 611	3352	Asn-1 to Gly-8.
HCORI18	HCORI18R	1178	105 - 317	3353	Asn-7 to Pro-33, Gly-40 to Gly-46, Tyr-49 to Tyr-71.
HCORI25	HCORI25R	1179	3 - 419	3354	Leu-35 to Tyr-40.

Additional data column:

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(for HCORI25R, 3354): L0754: 14, H0052: 13, L0748: 13, H0556: 12, L0591: 12, L0755: 11, L0752: 10, L0731: 9, L0660: 9, L0439: 8, L0777: 8, L0596: 8, H0046: 7, H0521: 7, L0758: 7, H0599: 6, H0622: 6, S0002: 6, L0646: 6, L0593: 6, H0265: 5, S0474: 5, L0776: 5, L0666: 5, L0741: 5, L0747: 5, S0026: 5, I0543: 5, H0619: 4, S0222: 4, H0013: 4, H0590: 4, H0544: 4, H0620: 4, H0124: 4, H0038: 4,

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S0422: 1, S0426: 1,
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HCQCR82	HCQCR82R	1180	48 - 206	3355	Glu-9 to Gly-17.	L0667: 1, L0363: 1, L0794: 1, L0803: 1, L0375: 1, L0651: 1, L0806: 1, L0805: 1, L0654: 1, L0379: 1, L0526: 1, L0519: 1, L0647: 1, L0791: 1, S0428: 1, H0144: 1, S0374: 1, H0520: 1, S0126: 1, H0711: 1, H0660: 1, H0672: 1, S0328: 1, H0539: 1, S0406: 1, H0555: 1, H0436: 1, H0627: 1, S0432: 1, S0037: 1, L0743: 1, L0744: 1, L0751: 1, S0031: 1, S0394: 1, L0592: 1, L0485: 1, L0608: 1, L0366: 1, H0136: 1, H0506: 1 and H0352: 1.
HCRME42	HCRME42R	1181	1 - 537	3356	Lys-14 to Gly-26, Glu-33 to Arg-44, Pro-64 to Pro-69, Pro-79 to Asn-88, Thr-109 to Pro-123.	
HDABR53	HDABR53R	1182	2 - 463	3357		
HDLBE03	HDLBE03R	1183	158 - 325	3358	Ala-17 to Asn-23.	
HDPFI26	HDPFI26R	1184	37 - 303	3359	Ser-1 to Thr-8,	

HDTAQ74	HDTAQ74R	1185	133 - 414	3360	Glu-17 to Ala-32, Arg-39 to Trp-47.	L0759: 10, L0774: 3, H0648: 3, H0686: 2, S0360: 2, L0622: 2, H0486: 2, L0521: 2, L0775: 2, H0659: 2, S0328: 2, L0779: 2, L0755: 2, H0341: 1, S0354: 1, S0358: 1, H0351: 1, S0222: 1, L0021: 1, H0025: 1, L0105: 1, T0115: 1, H0545: 1, H0571: 1, H0050: 1, L0471: 1, S6028: 1, S0003: 1, H0031: 1, H0316: 1, H0038: 1, H0087: 1, H0494: 1, H0509: 1, S0142: 1, L0520: 1, L0769: 1, L0638: 1, L0772: 1, L0794: 1, L0803: 1, L0804: 1, L0382: 1, L0367: 1, L0665: 1, S0374: 1, H0690: 1, H0684: 1, S0044: 1, S3012: 1, S0027: 1, L0744: 1, L0777: 1, L0758: 1, L0604: 1, S0026: 1 and

						S0276: 1.	
HDTBP08	HDTBP08R	1186	231 - 431	3361	Leu-21 to Ala-27, Pro-48 to Gly-55.		L0748: 50, L0754: 42, L0731: 31, H0644: 30, L0747: 29, H0551: 22, S0418: 21, L0659: 17, H0619: 15, L0663: 14, L0666: 13, S0360: 10, H0622: 10, H0031: 10, H0553: 10, L0662: 10, S0126: 10, L0757: 10, L0603: 10, S0420: 8, H0486: 8, H0013: 8, H0050: 8, H0623: 8, L0717: 7, H0144: 7, L0770: 6, L0750: 6, H0427: 5, H0024: 5, H0328: 5, H0030: 5, L0773: 5, L0665: 5, L0749: 5, H0713: 4, T0039: 4, S0280: 4, H0012: 4, H0038: 4, L0794: 4, L0774: 4, L0775: 4, L0805: 4, H0624: 3, H0170: 3, H0171: 3, S0356: 3, H0329: 3, S0046: 3,
HDTDA21	HDTDA21R	1187	207 - 431	3362	Ala-14 to Leu-20.		
HDTDB88	HDTDB88R	1188	102 - 215	3363	Tyr-25 to Phe-32.		
HDTJR38	HDTJR38R	1189	179 - 364	3364			

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HE8QX44	HE8QX44R	1190	1 - 288	3365	Thr-8 to Thr-22, Phe-42 to Lys-51, Arg-60 to Lys-69.
HE9QU094	HE9QU94R	1191	3 - 170	3366	Arg-1 to Cys-23, Trp-25 to Ser-35.
HEAHF02	HEAHF02R	1192	32 - 376	3367	Ser-10 to Thr-34, Ser-37 to Asn-89.
HEEAY40	HEEAY40R	1193	3 - 128	3368	Thr-15 to Ser-26.

| HEGAF68 | HEGAF68R | 1194 | 45 - 221 | 3369 | Glu-9 to Gly-17. | |
| HEOSP11 | HEOSP11R | 1195 | 96 - 395 | 3370 | Pro-13 to Leu-25. | H0457: 14, L0751: 13, H0617: 8, L0761: 7, L0666: 6, L0664: 6, L0665: 6, H0593: 6, L0662: 5, L0748: 5, H0052: 4, H0014: 4, H0529: 4, L0655: 4, L0809: 4, L0663: 4, H0436: 4, L0747: 4, L0758: 4, H0592: 3, H0587: 3, H0581: 3, L0763: 3, L0769: 3, L0659: 3, H0539: 3, L0779: 3, S0434: 3, H0506: 3, H0295: 2, H0650: 2, H0657: 2, L0005: 2, S0356: 2, S0442: 2, S0354: 2, S0360: 2, H0580: 2, H0733: 2, H0553: 2, H0135: 2, H0560: 2, H0625: 2, H0647: 2, L0374: 2, L0657: 2, L0647: 2, H0682: 2, L0672: 2, H0521: 2, S0028: 2, L0743: 2, L0749: 2, L0752: 2, L0755: 2, L0759: 2, L0593: 2, S0446: 2, |

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S0222: 1, H0441: 1,
H0392: 1, H0600: 1,
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H0318: 1, S0474: 1,
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H0009: 1, H0567: 1,
H0571: 1, H0050: 1,
L0471: 1, S0051: 1,
S6028: 1, H0687: 1,
H0428: 1, H0622: 1,
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L0142: 1, H0181: 1,
H0032: 1, H0056: 1,
H0100: 1, H0494: 1,
H0561: 1, H0652: 1,
S0142: 1, S0344: 1,
L0625: 1, L0770: 1,

HFABK01	HFABK01R	1196	26 - 112	3371	Asn-4 to Tyr-9.	L0639: 1, L0646: 1, L0800: 1, L0641: 1, L0642: 1, L0648: 1, L0794: 1, L0766: 1, L0649: 1, L0650: 1, L0774: 1, L0651: 1, L0653: 1, L0776: 1, L0629: 1, L0656: 1, L0636: 1, L5623: 1, L0792: 1, S0428: 1, H0726: 1, S0310: 1, H0690: 1, H0684: 1, H0658: 1, H0670: 1, S0330: 1, S0380: 1, S0404: 1, S0406: 1, H0555: 1, L0611: 1, H0540: 1, L0741: 1, L0744: 1, L0777: 1, S0436: 1, L0601: 1, L0366: 1, S0106: 1, S0192: 1, H0423: 1 and S0424: 1.
HFADS75	HFADS75R	1197	102 - 365	3372	Ala-16 to Arg-26, Pro-68 to Gly-78.	
HFIBG63	HFIBG63R	1198	2 - 409	3373		
HFIJB15	HFIJB15R	1199	32 - 151	3374		
HFIXK57	HFIXK57R	1200	2 - 211	3375		H0594: 18, L0777: 10, L0766: 6, H0595: 6, H0170: 5, H0373: 5,

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L0758: 3, S0194: 3,
L0717: 2, S0280: 2,
H0428: 2, H0063: 2,
S0344: 2, S0422: 2,
L0650: 2, L0659: 2,
L0666: 2, L0663: 2,
L0439: 2, H0685: 1,
S0218: 1, H0650: 1,
H0177: 1, H0402: 1,
S0358: 1, S0360: 1,
S0046: 1, S0278: 1,
H0550: 1, S0222: 1,
H0431: 1, H0600: 1,
H0592: 1, H0587: 1,
H0486: 1, L0021: 1,
H0599: 1, H0037: 1,
H0263: 1, H0545: 1,
H0050: 1, H0057: 1,
L0163: 1, T0023: 1,
H0598: 1, S0036: 1,
H0551: 1, H0100: 1,
H0359: 1, L0065: 1,
H0649: 1, L0769: 1,

HFIZQ64	HFIZQ64R	1201	18 - 137	Glu-27 to Leu-36.	L0761: 1, L0667: 1, L0630: 1, L0372: 1, L0764: 1, L0521: 1, L0533: 1, L0775: 1, L0651: 1, L0806: 1, L0655: 1, L0656: 1, S0374: 1, H0547: 1, S0328: 1, H0539: 1, H0696: 1, L0741: 1, L0744: 1, L0740: 1, L0754: 1, L0747: 1, L0750: 1, L0753: 1, L0759: 1, S0031: 1, L0485: 1, L0362: 1, S0242: 1, H0543: 1 and S0398: 1.
HFKKK36	HFKKK36R	1202	3 - 86	Pro-3 to Tyr-22.	
HFPEC93	HFPEC93R	1203	75 - 233	Lys-17 to Thr-23.	
HFPIX37	HFPIX37R	1204	1 - 270	Pro-75 to Cys-89.	AR089: 4, AR096: 3, AR033: 3, AR060: 3, AR061: 1, AR104: 1, AR055: 1, AR053: 0, AR039: 0, AR052: 0 H0583: 1, H0662: 1, S0222: 1, S0049: 1, H0272: 1, H0670: 1, H0521: 1, H0555: 1 and S0436: 1.
HFTDK36	HFTDK36R	1205	18 - 314	Cys-5 to Pro-21,	

HFVIB28	HFVIB28R	1206	11 - 250	3381	His-66 to Leu-77, Gln-80 to Ala-88, Tyr-92 to Ser-98.		
HFXGR60	HFXGR60R	1207	353 - 57	3382		S0001: 1	
HHAUD07	HHAUD07R	1208	304 - 426	3383	Val-24 to Leu-31.		
HHBFO21	HHBFO21R	1209	54 - 230	3384			
IHEVG50	IHEVG50R	1210	1 - 474	3385			
HHFGQ65	HHFGQ65RA	1211	53 - 277	3386	Arg-2 to Ser-7.		
HHHFOE48	HHHFOE48RP 00B	1212	181 - 426	3387			H0666: 13, S0358: 10, H0620: 10, L0750: 8, L0747: 7, L0731: 7, H0135: 5, L0659: 5, L0740: 5, L0757: 5, S0360: 4, H0123: 4, S0022: 4, L0666: 4, L0665: 4, S0028: 4, L0748: 4, L0777: 4, L0588: 4, H0265: 3, S0420: 3, H0208: 3, H0545: 3, H0046: 3, H0024: 3, H0284: 3, H0100: 3, L0650: 3, L0375: 3, L0382: 3, H0651: 3, L0755: 3, H0352: 3, S0278: 2, H0592: 2, H0333: 2, H0253: 2, H0544: 2, H0081: 2, H0012: 2, H0266: 2, H0286: 2,

H0252: 2, H0428: 2,
H0628: 2, H0551: 2,
S0210: 2, L0763: 2,
L0770: 2, L0774: 2,
L0661: 2, L0518: 2,
L0809: 2, H0547: 2,
H0682: 2, H0670: 2,
S0037: 2, S0027: 2,
L0751: 2, L0752: 2,
L0758: 2, L0601: 2,
H0668: 2, S0194: 2,
H0170: 1, H0556: 1,
H0686: 1, S0040: 1,
H0716: 1, H0295: 1,
H0341: 1, H0638: 1,
S0418: 1, S0376: 1,
S0444: 1, H0580: 1,
H0329: 1, S0468: 1,
S0045: 1, S0046: 1,
S0132: 1, S0476: 1,
H0619: 1, H0645: 1,
L0717: 1, H0549: 1,
H0550: 1, L0021: 1,
H0587: 1, H0581: 1,
H0575: 1, H0309: 1,
H0052: 1, H0457: 1,
H0546: 1, H0044: 1,
H0150: 1, H0050: 1,
H0563: 1, H0051: 1,
L0163: 1, H0051: 1,

HHSFPG15	HHSFG15R	1213	3 - 62	3388		H0615: 1, H0688: 1, H0031: 1, H0634: 1, H0087: 1, H0334: 1, H0633: 1, H0646: 1, L0772: 1, L0800: 1, L0643: 1, L0764: 1, L0662: 1, L0767: 1, L0775: 1, L0651: 1, L0806: 1, L0805: 1, L0776: 1, L0656: 1, L0783: 1, L0383: 1, L0543: 1, L0789: 1, L0663: 1, H0593: 1, H0684: 1, H0659: 1, H0658: 1, H0660: 1, H0709: 1, S0152: 1, L0521: 1, H0627: 1, L0611: 1, L0439: 1, L0745: 1, L0759: 1, L0593: 1, L0361: 1, L0603: 1, S0026: 1, H0667: 1 and H0506: 1.	
HHSGP15	HHSGP15R	1214	77 - 142	3389			
HHSGQ17	HHSGQ17R	1215	112 - 270	3390			
HKBAD05	HKBAD05R	1216	49 - 315	3391	Pro-13 to Leu-18, Leu-37 to Arg-42, Lys-65 to Gly-77.		
HKZAD21	HKZAD21R	1217	244 - 405	3392			
HKZAE07	HKZAE07R	1218	1 - 138	3393	Val-40 to Tyr-46.	L0752: 11, L0662: 9,	

L0596: 9, L0659: 8,
L0665: 7, L0766: 5,
L0750: 5, L0521: 4,
L0740: 4, L0757: 4,
L0771: 3, L0775: 3,
L0809: 3, L0666: 3,
L0664: 3, H0648: 3,
L0755: 3, L0758: 3,
L0591: 3, L0785: 2,
L0717: 2, H0036: 2,
H0052: 2, H0529: 2,
L0769: 2, L0637: 2,
L0646: 2, L0765: 2,
L0651: 2, L0653: 2,
L0776: 2, L0655: 2,
L0663: 2, H0682: 2,
L0748: 2, L0439: 2,
L0731: 2, L0759: 2,
L0593: 2, L0595: 2,
L0601: 2, H0686: 1,
S0134: 1, L0778: 1,
H0484: 1, H0661: 1,
H0662: 1, H0393: 1,
H0643: 1, H0002: 1,
H0599: 1, H0318: 1,
S0049: 1, H0251: 1,
L0040: 1, H0545: 1,
L0041: 1, N0006: 1,
N0007: 1, S0388: 1,
L0483: 1, H0606: 1,

HKZAG45	HKZAG45RA	1219	79 - 327	3394	Gly-1 to Val-7, Lys-15 to Leu-25, Pro-52 to Cys-57.	H0038: 1, H0040: 1, H0551: 1, H0413: 1, H0059: 1, H0560: 1, H0538: 1, S0002: 1, L0763: 1, L0772: 1, L0364: 1, L0649: 1, L0661: 1, L0657: 1, L0542: 1, L0526: 1, L0783: 1, L0382: 1, L0519: 1, L0528: 1, L0788: 1, L0565: 1, L0438: 1, H0547: 1, H0689: 1, H0690: 1, H0435: 1, H0658: 1, H0660: 1, S0328: 1, L0602: 1, S0004: 1, S0044: 1, S0404: 1, H0555: 1, H0436: 1, S0028: 1, L0742: 1, L0751: 1, L0747: 1, L0756: 1, L0592: 1, L0581: 1, L0603: 1, H0543: 1, H0422: 1 and H0352: 1.
HKZAI14	HKZAI14R	1220	3 - 368	3395	Lys-47 to Glu-52, Ala-71 to Asp-76, Asp-89 to Ser-110.	

| HKZAI68 | HKZAI68RA | 1221 | 2 - 79 | 3396 | Ser-9 to Ala-15. | S0474: 22, S0360: 13, H0556: 11, S0358: 11, L0747: 11, H0087: 10, S0126: 10, H0124: 9, S0410: 8, S0278: 8, H0024: 8, L0588: 8, S0206: 7, S0046: 6, L0731: 6, H0543: 6, I0265: 5, S0212: 5, S0045: 5, H0620: 5, H0594: 5, H0090: 5, H0063: 5, H0551: 5, T0042: 5, L0530: 5, H0144: 5, H0696: 5, S3014: 5, L0758: 5, S0192: 5, S0116: 4, H0549: 4, H0013: 4, H0530: 4, H0544: 4, H0081: 4, L0471: 4, H0012: 4, H0644: 4, H0163: 4, H0412: 4, H0100: 4, L0769: 4, L0771: 4, S0027: 4, L0740: 4, L0757: 4, L0605: 4, H0423: 4, H0624: 3, H0713: 3, S0418: 3, S0444: 3, S0408: 3, H0251: 3, H0545: 3, S0051: 3, H0083: 3, H0290: 3, |

T0041: 3, S0344: 3,
L0662: 3, L0768: 3,
L0806: 3, L0659: 3,
L0608: 3, S0194: 3,
H0352: 3, S0040: 2,
H0717: 2, H0716: 2,
S0134: 2, H0341: 2,
H0402: 2, H0305: 2,
S0356: 2, H0580: 2,
S0476: 2, H0411: 2,
H0392: 2, H0586: 2,
H0575: 2, H0052: 2,
H0327: 2, H0546: 2,
H0373: 2, L0163: 2,
H0887: 2, H0284: 2,
H0286: 2, H0428: 2,
H0039: 2, H0628: 2,
H0413: 2, H0056c: 2,
S0440: 2, L0598: 2,
L0770: 2, L0521: 2,
L0776: 2, L0542: 2,
L0783: 2, L0529: 2,
L0663: 2, H0519: 2,
H0659: 2, S0378: 2,
H0518: 2, S0044: 2,
H0555: 2, H0627: 2,
S0028: 2, L0748: 2,
L0756: 2, L0755: 2,
S0031: 2, H0445: 2,
L0596c: 2, L0591: 2,

L0361: 2, S0026: 2,
I0506: 2, H0171: 1,
H0157: 1, S0342: 1,
T0049: 1, H0656: 1,
S0282: 1, H0484: 1,
H0255: 1, H0663: 1,
S0420: 1, S0376: 1,
L0717: 1, S6022: 1,
H0441: 1, H0370: 1,
H0592: 1, H0333: 1,
H0492: 1, L0623: 1,
T0039: 1, T0114: 1,
H0635: 1, H0156: 1,
S0280: 1, H0427: 1,
L0021: 1, H0706: 1,
H0004: 1, H0581: 1,
S0049: 1, H0196: 1,
H0085: 1, H0235: 1,
T0115: 1, H0046: 1,
H0086: 1, H0041: 1,
H0123: 1, H0015: 1,
H0051: 1, N0007: 1,
H0408: 1, H0375: 1,
H0266: 1, H0271: 1,
H0416: 1, H0292: 1,
S0003: 1, H0622: 1,
L0483: 1, H0553: 1,
H0617: 1, H0032: 1,
H0673: 1, H0674: 1,
H0135: 1, I0616: 1,

H0623: 1, S0438: 1,
H0132: 1, S0150: 1,
H0633: 1, S0144: 1,
S0210: 1, S0002: 1,
S0426: 1, H0695: 1,
L0763: 1, L0772: 1,
L0643: 1, L0764: 1,
L0766: 1, L0650: 1,
L0774: 1, L0775: 1,
L0654: 1, L0657: 1,
L0540: 1, L0526: 1,
L0518: 1, L0782: 1,
L0384: 1, L0519: 1,
L0544: 1, L0793: 1,
L0666: 1, H0702: 1,
H0701: 1, H0547: 1,
H0689: 1, H0682: 1,
H0660: 1, H0672: 1,
H0651: 1, S0328: 1,
S0330: 1, H0539: 1,
S0380: 1, H0521: 1,
H0522: 1, S0004: 1,
H0134: 1, H0436: 1,
S0392: 1, S0390: 1,
S0037: 1, S0032: 1,
L0743: 1, L0439: 1,
L0754: 1, L0750: 1,
L0779: 1, L0759: 1,
S0260: 1, H0595: 1,
H0707: 1, L0604: 1,

HKZAQ39	HKZAQ39R	1222	1 - 480	3397	Ser-1 to Lys-6, Asp-48 to Gly-55, Pro-68 to Phe-76, Pro-83 to Gly-89, Asn-100 to Asp-108, Glu-134 to Lys-141, Lys-144 to Asp-160.	H0668: 1, H0653: 1, H0542: 1, H0422: 1, S0042: 1, S0456: 1 and S0446: 1.
HKZAR58	HKZAR58R	1223	3 - 266	3398	Met-41 to Gln-47.	
HKZAS59	HKZAS59R	1224	1 - 462	3399	Gln-54 to Leu-59, Gln-70 to Lys-76, Lys-147 to Ser-154.	
HKZAS64	HKZAS64R	1225	1 - 276	3400	Asp-1 to His-35, Pro-67 to His-75.	
HKZAS84	HKZAS84R	1226	2 - 103	3401	Ser-11 to Gly-18.	L0743:19, L0731: 13, L0744: 12, L0748: 11, L0666: 9, L0751: 9, L0664: 8, H0144: 8, H0333: 7, H0517: 7, L0769: 7, L0662: 7, S0022: 6, H0616: 6, H0087: 6, L0483: 5, H0181: 5, L0517: 5, L0519: 5, L0754: 5, H0677: 5, S0051: 4, S0344: 4, L0663: 4,

H0658: 4, L0747: 4,
L0750: 4, L0757: 4,
H0295: 3, T0049: 3,
H0255: 3, L0622: 3,
T0039: 3, H0253: 3,
H0545: 3, L0163: 3,
H0594: 3, H0188: 3,
H0673: 3, H0100: 3,
S0142: 3, L0372: 3,
L0775: 3, L0776: 3,
L0657: 3, L0382: 3,
L0665: 3, H0672: 3,
S0027: 3, L0742: 3,
L0752: 3, S0260: 3,
H0445: 3, L0596: 3,
L0588: 3, L0599: 3,
S0420: 2, H0637: 2,
S0045: 2, S0132: 2,
S0300: 2, S0278: 2,
S0222: 2, H0431: 2,
H0392: 2, H0599: 2,
H0575: 2, H0052: 2,
H0309: 2, H0085: 2,
H0597: 2, H0544: 2,
H0428: 2, H0124: 2,
S0036: 2, H0163: 2,
H0038: 2, H0413: 2,
H0529: 2, L0369: 2,
L0763: 2, L0770: 2,
L0638: 2, L0764: 2,

L0771: 2, L0803: 2,
L0804: 2, L0375: 2,
L0655: 2, L0384: 2,
L0809: 2, L0532: 2,
S0374: 2, S0126: 2,
H0670: 2, H0651: 2,
H0521: 2, S0028: 2,
L0740: 2, L0485: 2,
L0362: 2, L0601: 2,
S0192: 2, S0424: 2,
L0600: 2, H0556: 1,
T0002: 1, H0686: 1,
S0040: 1, S0342: 1,
H0294: 1, S0114: 1,
S0134: 1, H0650: 1,
H0657: 1, L0785: 1,
H0341: 1, S0180: 1,
S0212: 1, H0484: 1,
H0483: 1, H0254: 1,
H0671: 1, H0662: 1,
H0402: 1, H0638: 1,
S0418: 1, S0356: 1,
T0007: 1, S0358: 1,
S0007: 1, H0208: 1,
H0441: 1, H0438: 1,
H0587: 1, S0005: 1,
L0623: 1, L0477: 1,
T0114: 1, S0280: 1,
L0021: 1, H0590: 1,
H0004: 1, H0618: 1,

S0010: 1, H0318: 1,
S0049: 1, I0251: 1,
H0596: 1, T0110: 1,
H0327: 1, H0009: 1,
H0123: 1, L0471: 1,
H0006: 1, H0014: 1,
H0051: 1, S0388: 1,
H0510: 1, S0334: 1,
H0687: 1, T0023: 1,
T0006: 1, H0424: 1,
H0182: 1, H0606: 1,
H0383: 1, H0165: 1,
H0166: 1, S0366: 1,
H0135: 1, H0090: 1,
T0067: 1, H0488: 1,
H0412: 1, T0069: 1,
S0112: 1, L0564: 1,
H0494: 1, S0015: 1,
H0561: 1, L0762: 1,
L0640: 1, L0637: 1,
L0761: 1, L0667: 1,
L0772: 1, L0373: 1,
L0646: 1, L0643: 1,
L0374: 1, L0765: 1,
L0773: 1, L0648: 1,
L0521: 1, L0768: 1,
L0364: 1, L0533: 1,
L0650: 1, L0774: 1,
L0376: 1, L0806: 1,
L0652: 1, L0653: 1,

HKZAV69	HKZAV69R	1227	2 - 412	3402	Val-6 to Lys-13, Tyr-23 to Asn-33, Lys-46 to Lys-51, Leu-75 to Asn-85, Asp-101 to Glu-106.	L0606: 1, L0629: 1, L0659: 1, L0636: 1, L0542: 1, L0526: 1, L0518: 1, L0782: 1, L0783: 1, H0689: 1, H0690: 1, H0682: 1, H0683: 1, H0659: 1, H0660: 1, S0328: 1, S0330: 1, S0380: 1, H0522: 1, S0004: 1, H0555: 1, L0611: 1, S3014: 1, S0206: 1, L0755: 1, L0758: 1, H0444: 1, L0587: 1, L0589: 1, L0605: 1, L0591: 1, L0608: 1, L0361: 1, L0366: 1, H0665: 1, S0242: 1, S0194: 1, H0543: 1, H0423: 1, S0460: 1, S0456: 1 and H0506: 1.
HKZAV72	HKZAV72R	1228	2 - 163	3403	Cys-1 to Val-33, Ala-47 to Glu-54.	
HKZAX48	HKZAX48R	1229	137 - 361	3404		L0771: 3, L0021: 1, S0036: 1, H0689: 1 and

HKZBB22	HKZBB22R	1230	2 - 520	3405	Arg-5 to Leu-11, Arg-32 to Lys-39, Thr-117 to Lys-122.	H0659: 1.
HKZBS89	HKZBS89R	1231	1 - 381	3406	Gln-41 to His-48, Leu-55 to Gly-61, Pro-71 to Gly-79, Ala-104 to His-111.	
HLDQQ80	HLDQQ80R	1232	2 - 112	3407	Ala-2 to Lys-12.	
HLDXE19	HLDXE19R	1233	2 - 190	3408		
HLJCD55	HLJCD55R	1234	2 - 151	3409		
HLJBI32	HLJBI32R	1235	430 - 648	3410		
HLJBI37	HLJBI37R	1236	144 - 398	3411	Pro-77 to Lys-85.	
HLTHA47	HLTHA47R	1237	118 - 411	3412	Pro-82 to Lys-92.	
HLTJA50	HLTJA50R	1238	331 - 585	3413		
HLWAC95	HLWAC95R	1239	2 - 337	3414	Gln-20 to Ser-30.	
HLWDZ38	HLWDZ38R	1240	57 - 275	3415	Phe-45 to Ser-51.	
HLYDI57	HLYDI57R	1241	2 - 238	3416		
HMCFO19	HMCFO19R	1242	131 - 199	3417		
HMCIZ44	HMCIZ44R	1243	67 - 225	3418	Lys-17 to Thr-23.	
HMCJE25	HMCJE25R	1244	3 - 161	3419	Met-40 to Thr-52.	
HMSPB25	HMSPB25R	1245	324 - 145	3420		
HMVBB04	HMVBB04R	1246	136 - 276	3421	Lys-18 to Lys-30.	
HNAAE01	HNAAE01R	1247	2 - 196	3422	Lys-18 to Lys-30.	
HNBUP08	HNBUP08R	1248	127 - 474	3423	Pro-37 to Arg-46, Gln-75 to Gly-81, Pro-83 to Ser-89.	L0766: 5, L0751: 4, H0662: 2, H0253: 2, L0754: 2, L0750: 2, H0170: 1, H0587: 1, H0327: 1, H0688: 1.

HNBUY37	HNBUY37R	1249	2 - 289	3424		H0428: 1, S0210: 1, L0763: 1, L0770: 1, L0769: 1, L0646: 1, L0662: 1, L0803: 1, L0776: 1, L0655: 1, L0658: 1, L0659: 1, L0789: 1, L0666: 1, L0663: 1, L0665: 1, H0658: 1, H0670: 1, H0660: 1, S0380: 1, L0740: 1, L0755: 1, L0758: 1, L0589: 1, L0361: 1 and S0192: 1.
HNBVL57	HNBVL57R	1250	179 - 541	3425	Gln-18 to Asp-35, Leu-52 to Gly-82.	L0783: 4, S0280: 2, H0662: 1, H0550: 1, L0764: 1, L0662: 1, L0809: 1 and H0684: 1.
HNHBC18	HNHBC18R	1251	1 - 279	3426		
HNJFE85	HNJFE85R	1252	2 - 454	3427		
HNKCO29	HNKCO29R	1253	1 - 351	3428		
HNOAA22	HNOAA22R	1254	33 - 425	3429		
HNOAB27	HNOAB27R	1255	397 - 621	3430		
HNOAB28	HNOAB28R	1256	116 - 232	3431		
HNOAB88	HNOAB88R	1257	3 - 551	3432		
HNOAC04	HNOAC04R	1258	112 - 219	3433		
HNOAC15	HNOAC15R	1259	1 - 138	3434	Thr-1 to Ser-8, Pro-22 to Ser-27.	

HNOAE50	HNOAE50R	1260	89 - 577	3435	Thr-5 to Thr-14, Arg-20 to His-25, Arg-35 to Gly-40, Lys-58 to Arg-66, His-101 to Ser-107, Arg-111 to Lys-125, Leu-131 to Glu-140.	
HNOAE65	HNOAE65R	1261	2 - 535	3436	Pro-13 to Arg-21, Ser-42 to Phe-52, Lys-69 to Val-77, Ile-82 to Glu-87, Gly-93 to Gln-99, Val-118 to Asn-124, Lys-143 to Leu-152, Arg-154 to Glu-178.	
HNOAF22	HNOAF22R	1262	67 - 555	3437	Thr-5 to Thr-14, Arg-20 to His-25, Arg-35 to Gly-40, Lys-58 to Arg-66, His-101 to Ser-107, Arg-111 to Lys-125, Leu-131 to Arg-139, Arg-145 to Leu-153.	
HNOAF36	HNOAF36R	1263	2 - 145	3438	Arg-11 to Pro-17.	H0651: 2
HNOAG34	HNOAG34R	1264	42 - 362	3439		
HNOAG94	HNOAG94R	1265	28 - 177	3440		
HNOAH67	HNOAH67R	1266	2 - 364	3441		
HNOAJ67	HNOAJ67R	1267	3 - 524	3442	Cys-2 to Gly-7.	
HNOAJ76	HNOAJ76R	1268	351 - 536	3443	Trp-6 to Glu-12.	H0134: 9, L0771: 8.

L0748: 7, L0731: 6,
L0591: 6, L0592: 6,
L0770: 5, L0747: 5,
L0749: 5, L0750: 5,
H0136: 5, H0050: 4,
H0625: 4, H0529: 4,
L0769: 4, L0752: 4,
L0758: 4, S0007: 3,
S0045: 3, H0591: 3,
H0561: 3, L0761: 3,
L0645: 3, L0766: 3,
L0655: 3, L0657: 3,
L0666: 3, H0996: 3,
H0436: 3, L0754: 3,
L0756: 3, L0755: 3,
H0543: 3, H0686: 2,
H0125: 2, S0420: 2,
S0376: 2, H0351: 2,
L0581: 2, S0049: 2,
H0052: 2, L0163: 2,
H0428: 2, H0090: 2,
H0040: 2, T0041: 2,
H0494: 2, H0646: 2,
L0763: 2, L0521: 2,
L0776: 2, L0665: 2,
H0144: 2, L0751: 2,
L0745: 2, S0031: 2,
L0581: 2, L0608: 2,
H0170: 1, H0171: 1,
H0394: 1, S0114: 1,

S0218: 1, H0656: 1,
S0444: 1, S0360: 1,
H0637: 1, H0580: 1,
H0619: 1, H0393: 1,
L0717: 1, H0497: 1,
H0486: 1, T0039: 1,
T0114: 1, H0013: 1,
H0244: 1, H0635: 1,
H0427: 1, H0318: 1,
H0178: 1, L0157: 1,
H0081: 1, S0051: 1,
H0292: 1, S0003: 1,
L0483: 1, H0316: 1,
H0135: 1, H0634: 1,
H0551: 1, H0560: 1,
S0440: 1, H0538: 1,
L0640: 1, L0796: 1,
L0667: 1, L0772: 1,
L0373: 1, L0764: 1,
L0662: 1, L0363: 1,
L0768: 1, L0649: 1,
L0388: 1, L0650: 1,
L0774: 1, L0775: 1,
L0375: 1, L0524: 1,
L0653: 1, L0659: 1,
L0663: 1, L0664: 1,
S0053: 1, H0520: 1,
S0126: 1, H0435: 1,
H0660: 1, H0672: 1,
H0651: 1, H0521: 1,

HNOAK11	HNOAK11R	1269	2 - 157	3444		H0704: 1, S0044: 1, H0187: 1, S0028: 1, L0740: 1, L0779: 1, L0777: 1, L0753: 1, L0759: 1, L0596: 1, L0597: 1, L0595: 1, S0026: 1, H0217: 1 and S0384: 1.
HNOAL51	HNOAL51R	1270	43 - 207	3445		
HNOAN85	HNOAN85R	1271	1 - 180	3446		
HNOAO59	HNOAO59R	1272	403 - 759	3447	Phe-74 to Pro-81.	
HNOAO71	HNOAO71R	1273	2 - 283	3448	Gly-1 to Leu-6, Pro-47 to Asp-52, Lys-63 to Glu-68.	
HNOAP21	HNOAP21R	1274	2 - 730	3449	Arg-9 to Arg-27, Gly-43 to Lys-48, Asp-61 to Ser-67, Ala-124 to Gly-130, Thr-146 to Lys-151, Phe-165 to Lys-170.	
HNOAQ24	HNOAQ24R	1275	2 - 664	3450		L0666: 10, H0510: 8, H0046: 6, H0617: 6, S0051: 4, H0135: 4, L0776: 4, L0439: 4, H0509: 3, L0665: 3, L0747: 3, H0445: 3, H0662: 2, S0420: 2, S0222: 2, H0574: 2, H0632: 2, H0427: 2,

H0575: 2, H0618: 2,
H0253: 2, H0052: 2,
H0545: 2, H0123: 2,
H0687: 2, H0428: 2,
H0100: 2, L0662: 2,
L0806: 2, L0657: 2,
L0659: 2, L0664: 2,
H0691: 2, H0651: 2,
L0744: 2, L0592: 2,
L0599: 2, L0601: 2,
S0040: 1, S0212: 1,
H0483: 1, H0255: 1,
H0663: 1, S0354: 1,
H0208: 1, S6022: 1,
H0441: 1, H0357: 1,
H0455: 1, H0592: 1,
H0331: 1, N0009: 1,
H0013: 1, S0280: 1,
H0349: 1, H0042: 1,
S0049: 1, H0327: 1,
H0544: 1, H0178: 1,
H0012: 1, H0246: 1,
H0024: 1, H0071: 1,
H0107: 1, S6028: 1,
H0266: 1, T0023: 1,
T0006: 1, H0124: 1,
S0036: 1, H0264: 1,
H0059: 1, H0633: 1,
H0647: 1, S0142: 1,
L0369: 1, L0371: 1,

HNOAQ47	HNOAQ47R	1276	1 - 642	3451	Ser-15 to Glu-23, Val-33 to Gly-40, Arg-47 to Pro-59, Ser-64 to Phe-70, Gly-92 to Lys-97, Lys-155 to Glu-166.	L0770: 1, L0769: 1, L0645: 1, L0764: 1, L0768: 1, L0775: 1, L0651: 1, L0525: 1, L0378: 1, L0653: 1, L0518: 1, L0809: 1, L0789: 1, L0792: 1, H0520: 1, S0126: 1, H0659: 1, H0658: 1, H0672: 1, H0539: 1, H0521: 1, S0044: 1, S0028: 1, L0743: 1, L0748: 1, S0031: 1, L0485: 1, H0653: 1, H0665: 1, H0667: 1, S0192: 1 and L0698: 1.
HNOAR74	HNOAR74R	1277	122 - 400	3452	Pro-5 to Gly-11, Ser-20 to Ser-27.	L0794: 3, H0657: 2, L0766: 2, L0783: 2, L0789: 2, L0777: 2, L0759: 2, H0656: 1, S0116: 1, S0444: 1, S0360: 1, H0431: 1, S0010: 1, H0052: 1, H0596: 1, H0687: 1.

HNOAR85	HNOAR85R	1278	278 - 562	3453	Ser-48 to Leu-56, Ser-70 to Val-75, Thr-83 to Ala-92.	H0634: 1, L0637: 1, L0648: 1, L0649: 1, L0804: 1, L0774: 1, L0776: 1, L0655: 1, L0606: 1, L0809: 1, H0144: 1, H0698: 1, L0438: 1, H0690: 1, H0660: 1, H0651: 1, L0747: 1, L0749: 1, L0758: 1, L0601: 1, S0242: 1, S0196: 1 and H0543: 1. L0758: 6, H0031: 4, H0341: 3, S0022: 3, S0376: 2, H0586: 2, H0156: 2, H0575: 2, L0769: 2, L0803: 2, L0655: 2, L0809: 2, H0522: 2, S0027: 2, H0445: 2, S0412: 2, H0656: 1, S0358: 1, S0360: 1, H0574: 1, H0486: 1, H0013: 1, H0318: 1, H0327: 1, L0157: 1, H0015: 1, H0083: 1, S0003: 1, S0214: 1, H0039: 1, H0673: 1, H0591: 1, T0067: 1, H0412: 1, H0494: 1, H0529: 1,

HNOAS07	HNOAS07R	1279	84 - 521	3454	Asn-80 to Gly-86, Glu-133 to Arg-138.	L0372: 1, L0764: 1, L0794: 1, L0649: 1, L0774: 1, L0775: 1, L0651: 1, L0807: 1, L0657: 1, L0789: 1, L0663: 1, H0519: 1, S0126: 1, H0684: 1, H0660: 1, H0666: 1, H0651: 1, H0518: 1, H0521: 1, S0028: 1, L0747: 1, L0777: 1, L0731: 1, S0194: 1, H0543: 1 and S0424: 1.
HNOAS36	HNOAS36R	1280	3 - 254	3455	Leu-1 to Thr-7, Pro-39 to Ser-48, Trp-62 to Thr-68.	
HNOAS92	HNOAS92R	1281	2 - 385	3456	Pro-28 to Tyr-37, Leu-52 to Trp-57, Lys-109 to Leu-114.	H0457: 4, H0441: 3, H0393: 2, H0052: 2, H0620: 2, S0144: 2, H0521: 2, H0341: 1, S0358: 1, H0587: 1, H0632: 1, H0581: 1, H0309: 1, L0471: 1, H0622: 1, H0424: 1, H0213: 1, S0366: 1, H0163: 1, H0132: 1, S0142: 1, H0529: 1, H0547: 1, H0651: 1,

HNOAT40	HNOAT40R	1282	96 - 317	3457	S3014: 1, L0748: 1, L0777: 1 and L0599: 1.
					L0794: 5, L0438: 4, H0457: 4, L0651: 4, H0581: 3, L0777: 3, S0116: 2, S0007: 2, S0222: 2, S0049: 2, N0006: 2, L0163: 2, S6028: 2, L0351: 2, H0130: 2, L0638: 2, L0803: 2, L0805: 2, L0439: 2, L0754: 2, L0750: 2, L0755: 2, H0580: 1, H0645: 1, H0486: 1, H0013: 1, S0346: 1, H0009: 1, L0157: 1, H0567: 1, H0562: 1, H0050: 1, T0010: 1, H0606: 1, H0040: 1, H0063: 1, S0210: 1, L0761: 1, L0667: 1, L0774: 1, L0526: 1, L0532: 1, L0666: 1, L0665: 1, H0658: 1, H0521: 1, H0576: 1, L0753: 1, L0758: 1, L0759: 1, L0593: 1, L0366: 1, H0543: 1 and S0462: 1.

HNOAT76	HNOAT76R	1283	2 - 187	3458		
HNOAV91	HNOAV91R	1284	2 - 439	3459	Lys-28 to Tyr-49, Arg-75 to Ala-83, Thr-90 to Ala-95, Arg-107 to Asp-114, Arg-137 to Ser-146.	
HNOBD17	HNOBD17R	1285	98 - 316	3460		
HNOBE83	HNOBE83R	1286	2 - 607	3461	Arg-1 to Gly-6, Lys-21 to Gly-29, Gln-51 to Gly-56, Pro-82 to Asp-90, Lys-175 to Ser-180.	L0747:16, H0651:10, H0561:9, L0758:8, H0046:7, L0663:7, S0026:7, H0656:6, H0393:6, H0494:6, L0774:6, L0659:6, L0665:6, L0750:6, L0731:6, L0596:6, H0543:6, H0341:5, H0575:5, H0529:5, L0662:5, L0655:5, H0539:5, L0439:5, L0752:5, S0114:4, H0657:4, H0351:4, H0581:4, H0551:4, H0560:4, S0372:4, L0769:4, L0764:4, L0776:4, H0144:4, H0660:4, H0648:4, H0672:4, S0028:4, L0749:4, L0362:4, H0580:3, H0497:3, H0486:3, H0318:3,

H0014: 3, H0373: 3,
H0553: 3, H0038: 3,
T0041: 3, S0002: 3,
L0761: 3, L0664: 3,
S0126: 3, H0658: 3,
H0666: 3, S0380: 3,
S0152: 3, H0521: 3,
H0707: 3, L0589: 3,
L0605: 3, L0599: 3,
L0593: 3, H0423: 3,
H0265: 2, H0661: 2,
S0356: 2, S0358: 2,
S0360: 2, S0408: 2,
S0410: 2, S0046: 2,
H0409: 2, S0280: 2,
H0251: 2, L0738: 2,
L0471: 2, H0057: 2,
L0185: 2, H0594: 2,
H0188: 2, S0003: 2,
H0090: 2, H0412: 2,
H0413: 2, S0440: 2,
S0150: 2, S0144: 2,
H0538: 2, L0763: 2,
L0627: 2, L0775: 2,
L0653: 2, H0519: 2,
H0435: 2, H0659: 2,
H0436: 2, H0478: 2,
S0027: 2, L0756: 2,
L0755: 2, L0759: 2,
H0045: 2, L0588: 2,

L0590: 2, H0542: 2,
H0422: 2, H0171: 1,
L0448: 1, H0556: 1,
H0222: 1, S0342: 1,
H0650: 1, S0035: 1,
H0483: 1, H0671: 1,
H0662: 1, H0449: 1,
H0459: 1, H0125: 1,
S0420: 1, S0354: 1,
S0444: 1, S0045: 1,
H0443: 1, H0370: 1,
H0392: 1, L0622: 1,
L0623: 1, T0040: 1,
H0013: 1, H0635: 1,
H0427: 1, H0156: 1,
H0590: 1, S0010: 1,
H0052: 1, T0110: 1,
H0597: 1, H0546: 1,
H0009: 1, H0093: 1,
S0051: 1, T0010: 1,
H0510: 1, H0267: 1,
H0687: 1, H0252: 1,
H0428: 1, H0039: 1,
H0622: 1, H0181: 1,
H0032: 1, H0068: 1,
H0598: 1, H0040: 1,
H0087: 1, T0067: 1,
H0488: 1, L0564: 1,
T0042: 1, H0625: 1,
H0130: 1, H0641: 1,

HNOBV55	HNOBV55RA	1287	111 - 506	3462	Pro-14 to Gly-22, Ile-31 to Ala-36, Lys-53 to Ile-65.	H0633: 1, S0208: 1, S0422: 1, S0426: 1, L0520: 1, L0762: 1, L0770: 1, L0796: 1, L0630: 1, L0646: 1, L0773: 1, L0766: 1, L0381: 1, L0388: 1, L0804: 1, L0650: 1, L0375: 1, L0651: 1, L0784: 1, L0656: 1, L0518: 1, L0519: 1, L0530: 1, L0368: 1, S0053: 1, S0374: 1, H0547: 1, H0689: 1, H0682: 1, H0684: 1, H0670: 1, H0518: 1, S0013: 1, H0704: 1, S0044: 1, H0214: 1, S0404: 1, S0406: 1, H0555: 1, H0576: 1, S0392: 1, L0751: 1, S0031: 1, H0444: 1, S0106: 1, S0011: 1, H0667: 1, S0192: 1, S0242: 1, S0276: 1, L0697: 1 and L0360: 1.
HNOCE63	HNOCE63R	1288	2 - 394	3463	Val-2 to Leu-20.	

HNOCL43	HNOCL43R	1289	2 - 193	3464	
HNOCN02	HNOCN02R	1290	1 - 624	3465	
HNOCN10	HNOCN10R	1291	1 - 453	3466	H0556: 11, H0265: 9, H0012: 4, H0616: 4, H0393: 3, H0620: 3, L0163: 3, H0135: 3, S0002: 3, H0651: 3, L0596: 3, H0542: 3, H0543: 3, S0418: 2, S0045: 2, H0266: 2, S0150: 2, H0521: 2, L0591: 2, S0040: 1, H0341: 1, H0663: 1, S0354: 1, S0358: 1, S0046: 1, S0222: 1, H0586: 1, H0486: 1, H0635: 1, I0618: 1, H0581: 1, S0049: 1, H0263: 1, T0103: 1, T0110: 1, H0009: 1, T0003: 1, H0373: 1, S0051: 1, S0336: 1, H0290: 1, H0286: 1, H0328: 1, H0622: 1, H0553: 1, I0124: 1, H0090: 1, S0038: 1, H0100: 1, T0042: 1, S0015: 1, H0560: 1, H0509: 1, H0130: 1, L0654: 1, H0144: 1,

HNOCR44	HNOCR44R	1292	3 - 581	3467	Pro-1 to Lys-10, Phe-31 to Asn-37, Gln-42 to Leu-50, Arg-58 to Gln-65, Leu-86 to Ala-91, Tyr-101 to Ala-111.	L0438: 1, H0547: 1, H0519: 1, H0593: 1, H0435: 1, L0602: 1, S0332: 1, H0522: 1, H0134: 1, S3014: 1, L0439: 1, H0445: 1, S0434: 1, L0485: 1, L0604: 1, L0593: 1, L0594: 1, L0601: 1, H0422: 1 and S0398: 1.
HNOCU03	HNOCU03R	1293	1 - 258	3468	Glu-1 to Asp-6.	
HNODD77	HNODD77R	1294	204 - 407	3469		
HNODG11	HNODG11R	1295	63 - 320	3470	Ser-47 to Ile-53.	
HNODM92	HNODM92R	1296	269 - 583	3471	Gly-35 to Glu-41.	
HNODP28	HNODP28R	1297	480 - 707	3472		
HNOJA93	HNOJA93R	1298	1 - 453	3473	Gly-13 to Lys-20, Ala-26 to Lys-32, Ala-83 to Leu-88, Gly-128 to Val-135, Phe-142 to Asn-151.	
HNOJB10	HNOJB10R	1299	2 - 391	3474		S0358: 7, L0750: 7, S0360: 6, H0617: 5, S0126: 4, H0545: 3,

L0776: 3, S0374: 3,
L0748: 3, L0755: 3,
L0588: 3, H0422: 3,
H0685: 2, H0549: 2,
H0550: 2, H0632: 2,
H0546: 2, H0424: 2,
H0163: 2, H0551: 2,
L0665: 2, H0593: 2,
H0660: 2, S0330: 2,
L0747: 2, L0749: 2,
L0777: 2, L0757: 2,
S0031: 2, H0556: 1,
H0686: 1, H0295: 1,
S0430: 1, H0657: 1,
H0341: 1, H0662: 1,
S0278: 1, H0282: 1,
H0592: 1, H0586: 1,
H0486: 1, T0039: 1,
T0109: 1, H0004: 1,
H0581: 1, H0309: 1,
H0596: 1, T0110: 1,
H0231: 1, H0123: 1,
H0620: 1, H0083: 1,
H0594: 1, H0687: 1,
L0483: 1, H0644: 1,
H0361: 1, H0087: 1,
H0413: 1, H0059: 1,
H0494: 1, S0306: 1,
S0440: 1, H0509: 1,
H0529: 1, L0762: 1,

HNOJB57	HNOJB57R	1300	2 - 355	3475	Arg-8 to Gln-18, Thr-24 to Gly-35, Lys-53 to Gly-61, Pro-77 to Cys-82, Pro-103 to Gln-117.	L0770: 1, L0769: 1, L0372: 1, L0764: 1, L0771: 1, L0773: 1, L0775: 1, L0375: 1, L0556: 1, L0655: 1, L0807: 1, L0656: 1, L0659: 1, L0540: 1, L0783: 1, L0384: 1, S0216: 1, H0144: 1, H0691: 1, H0690: 1, H0684: 1, H0658: 1, H0670: 1, H0672: 1, S0328: 1, S0378: 1, S0380: 1, H0518: 1, H0555: 1, S3014: 1, S0032: 1, L0741: 1, H0445: 1, L0596: 1, S0192: 1, S0194: 1, S0460: 1 and H0352: 1.
HNOJD14	HNOJD14R	1301	2 - 439	3476		
HNOJF20	HNOJF20R	1302	10 - 165	3477	Leu-14 to Arg-20, Ser-29 to Ser-38, Pro-43 to Gly-52.	
HNOJG05	HNOJG05R	1303	288 - 572	3478	Ile-34 to Ala-40.	
HNOJH48	HNOJH48R	1304	2 - 283	3479	Arg-70 to Ser-78.	L0748: 17, L0749: 13,

L0666: 9, H0547: 8,
L0758: 8, S0358: 7,
S0003: 7, L0754: 7,
L0485: 7, S0280: 6,
H0038: 6, H0521: 6,
S3014: 6, L0777: 6,
L0755: 6, H0068: 5,
L0659: 5, L0665: 5,
L0744: 5, L0740: 5,
L0591: 5, H0657: 4,
H0656: 4, S0116: 4,
H0318: 4, H0266: 4,
H0687: 4, H0031: 4,
H0040: 4, S0002: 4,
S0206: 4, L0752: 4,
H0445: 4, H0542: 4,
H0423: 4, H0497: 3,
H0013: 3, H0427: 3,
H0046: 3, H0014: 3,
H0615: 3, L0142: 3,
S0036: 3, H0090: 3,
H0551: 3, S0440: 3,
L0662: 3, L0767: 3,
H0696: 3, S0027: 3,
S0028: 3, L0731: 3,
L0362: 3, S0196: 3,
H0662: 2, H0638: 2,
H0580: 2, S0045: 2,
S0222: 2, H0587: 2,
H0486: 2, H0706: 2,

S0010: 2, S0346: 2,
T0048: 2, S0474: 2,
H0581: 2, H0428: 2,
L0483: 2, H0553: 2,
S0366: 2, H0634: 2,
H0616: 2, H0412: 2,
H0623: 2, L0763: 2,
L0637: 2, L0667: 2,
L0646: 2, L0768: 2,
L0774: 2, L0657: 2,
L0663: 2, H0144: 2,
S0374: 2, H0520: 2,
H0519: 2, S0126: 2,
S0328: 2, S0146: 2,
H0555: 2, H0436: 2,
L0747: 2, L0595: 2,
S0026: 2, S0194: 2,
H0506: 2, L0600: 2,
H0170: 1, H0171: 1,
H0556: 1, T0002: 1,
H0686: 1, S0114: 1,
T0049: 1, S0001: 1,
S0282: 1, H0663: 1,
H0305: 1, S0356: 1,
S0444: 1, H0329: 1,
S0046: 1, L0717: 1,
H0411: 1, H0550: 1,
H0441: 1, H0370: 1,
H0600: 1, S0005: 1,
H0333: 1, H0331: 1,

H0574: 1, T0082: 1, H0122: 1, H0196: 1, H0050: 1, L0471: 1, H0057: 1, H0373: 1, T001C: 1, H0510: 1, H0416: 1, S0318: 1, S0316: 1, S0214: 1, H0644: 1, H0074: 1, H0165: 1, H0168: 1, H0169: 1, H0674: 1, S0364: 1, H0708: 1, H0598: 1, H0135: 1, H0163: 1, H0591: 1, H0264: 1, H0272: 1, H0488: 1, H0413: 1, H0056: 1, S0386: 1, L0370: 1, T0041: 1, S0014: 1, H0131: 1, H0130: 1, H0647: 1, S0344: 1, S0422: 1, L0598: 1, L0640: 1, L0770: 1, L0769: 1, L0761: 1, L0772: 1, L0643: 1, L0771: 1, L0773: 1, L0766: 1, L0775: 1, L0375: 1, L0651: 1, L0806: 1, L0653: 1, L0776: 1, L0655: 1, L0656: 1, L0809: 1, L0790: 1,

HNOJH52	HNOJH52R	1305	3 - 200	3480		L079I: 1, L0664: 1, H0691: 1, H0689: 1, H0683: 1, H0455: 1, H0660: 1, H0648: 1, H0672: 1, H0539: 1, S0380: 1, H0710: 1, S0152: 1, S0013: 1, S0174: 1, H0478: 1, L0743: 1, L0750: 1, L0757: 1, S0031: 1, H0707: 1, L0588: 1, L0592: 1, L0599: 1, L0608: 1, L0604: 1, L0593: 1, H0668: 1, H0667: 1, S0192: 1, S0276: 1, H0422: 1, H0352: 1 and H0712: 1.
HNOJI82	HNOJI82R	1306	1 - 489	3481	Lys-36 to Gln-48, Gln-56 to Ser-72, Gly-82 to Val-105, Lys-114 to Lys-120, Ser-122 to Cys-133.	
HNOJI85	HNOJI85R	1307	1 - 552	3482	Ala-1 to Ser-6.	L0754: 5, L0731: 4, L0748: 3, L0750: 3, H0411: 2, H0012: 2, H0687: 2, H0644: 2, L0803: 2, H0550: 1, L0021: 1, H0599: 1, L0022: 1, H0042: 1,

HNOJJ20	HNOJJ20R	1308	1 - 261	3483	Lys-19 to Asn-25, Pro-61 to Lys-66.	H0575: 1, H0150: 1, H0620: 1, T0003: 1, H0673: 1, L0662: 1, L0650: 1, L0774: 1, L0375: 1, L0807: 1, L0515: 1, L0659: 1, L0666: 1, S0374: 1, H0694: 1, L0747: 1, L0749: 1, L0779: 1 and L0755: 1.
HNOJJ26	HNOJJ26R	1309	2 - 385	3484		
HNOJK66	HNOJK66R	1310	1 - 462	3485	Ser-27 to Gly-38, Ser-63 to Trp-72, Trp-79 to Asn-84, Arg-133 to Trp-139.	L0588: 14, S0046: 13, S0045: 12, T0049: 7, H0599: 7, L0662: 7, L0599: 7, H0427: 6, T0048: 6, H0575: 5, L0747: 5, H0254: 4, H0618: 4, H0617: 4, H0124: 4, H0413: 4, H0052: 3, H0024: 3, H0553: 3, H0269: 3, H0412: 3, H0056: 3, H0623: 3, L0764: 3, L0659: 3, L0809: 3, L0666: 3, L0750: 3, L0758: 3, L0600: 3, S0001: 2, H0255: 2, H0661: 2, H0619: 2,

S6022: 2, H0587: 2,
S0280: 2, H0253: 2,
H0150: 2, H0050: 2,
H0188: 2, H0644: 2,
S0364: 2, S0036: 2,
L0369: 2, L0768: 2,
L0803: 2, L0775: 2,
L0375: 2, L0783: 2,
L0438: 2, L0743: 2,
L0748: 2, L0439: 2,
L0779: 2, L0604: 2,
S6024: 1, L0785: 1,
S0360: 1, H0208: 1,
L0717: 1, H0437: 1,
H0369: 1, H0549: 1,
H0042: 1, H0309: 1,
H0085: 1, H0263: 1,
H0123: 1, S0050: 1,
L0163: 1, H0266: 1,
H0687: 1, H0039: 1,
H0622: 1, H0030: 1,
H0031: 1, H0163: 1,
H0616: 1, H0063: 1,
H0264: 1, H0268: 1,
L0763: 1, L0536: 1,
L0769: 1, L0638: 1,
L0643: 1, L0648: 1,
L0794: 1, L0804: 1,
L0774: 1, L0651: 1,
L0378: 1, L0806: 1,

HNOJL59	HNOJL59R	1311	204 - 479	3486	Glu-1 to Ser-9, Pro-60 to Gln-66.	L0555: 1, L0634: 1, L0788: 1, L0663: 1, L0665: 1, S0044: 1, S0190: 1, L0744: 1, L0749: 1, L0731: 1, H0445: 1, L0589: 1, L0361: 1, L0366: 1 and S0458: 1.
HNOJM64	HNOJM64R	1312	3 - 428	3487	Gly-105 to Glu-110, Ala-133 to Tyr-142.	
HNOJO55	HNOJO55R	1313	426 - 265	3488		
HNOJP42	HNOJP42R	1314	12 - 302	3489	Trp-42 to Glu-50.	
HNOJQ22	HNOJQ22R	1315	1 - 510	3490	Phe-164 to Leu-170.	
HNOKA20	HNOKA20R	1316	2 - 268	3491	Gln-30 to Gly-36, Lys-43 to Lys-54, Thr-73 to Ile-79.	
HNOKD74	HNOKD74R	1317	2 - 85	3492		
HNOKG34	HNOKG34R	1318	1 - 510	3493	Lys-17 to Leu-27, Thr-39 to Leu-44, Asp-62 to Gly-70, Arg-89 to Asp-94, Arg-102 to Gly-113, Lys-127 to Glu-132, Thr-152 to Arg-160.	
HNOKG69	HNOKG69R	1319	188 - 418	3494		
HNOKG71	HNOKG71R	1320	2 - 331	3495	Gly-8 to Ala-15, Leu-33 to His-50,	

| HNOKH94 | HNOKH94R | 1321 | 214 - 411 | 3496 | Phe-59 to Gly-64, Gly-70 to Gly-84, Thr-20 to Asp-27, His-39 to Thr-44. | L0666: 11, S0358: 8, L0752: 8, L0749: 5, L0362: 5, L0771: 4, L0803: 4, L0528: 4, L0664: 4, L0740: 4, L0754: 4, L0599: 4, L0769: 3, L0662: 3, L0657: 3, L0659: 3, L0663: 3, L0748: 3, L0750: 3, L0757: 3, L0758: 3, H0171: 2, S0360: 2, H0574: 2, H0251: 2, L0483: 2, H0412: 2, H0509: 2, L0770: 2, L0774: 2, L0775: 2, L0665: 2, H0690: 2, S0330: 2, L0755: 2, L0731: 2, L0595: 2, H0624: 1, H0170: 1, H0685: 1, H0656: 1, H0663: 1, H0305: 1, H0589: 1, S0356: 1, S0354: 1, H0580: 1, S0132: 1, S0300: 1, L0717: 1, H0331: 1, H0013: 1, H0108: 1, L0105: 1, H0052: 1, H0546: 1, |

| HNOKI06 HNOKI06R | 1322 | 3 - 419 | 3497 | Asp-36 to Glu-46, Gln-52 to Ile-61, Leu-76 to Lys-87, Asn-100 to Val-108, Ser-120 to Gln-128. | H0123: 1, H0024: 1, H0373: 1, H0266: 1, H0687: 1, L0142: 1, H0628: 1, H0673: 1, H0598: 1, H0038: 1, H0529: 1, L0763: 1, L0637: 1, L0761: 1, L0646: 1, L0641: 1, L0768: 1, L0804: 1, L0650: 1, L0776: 1, L0656: 1, L0526: 1, L0367: 1, S0374: 1, H0691: 1, H0519: 1, H0682: 1, H0684: 1, H0648: 1, L0602: 1, S0454: 1, L0439: 1, L0747: 1, L0779: 1, L0780: 1, L0753: 1, L0759: 1, S0434: 1, L0591: 1, L0592: 1, L0608: 1, L0366: 1, S0194: 1 and H0542: 1. | S0410: 13, L0766: 5, H0657: 4, S0422: 4, H0547: 4, S0408: 3, L0758: 3, S0444: 2, H0587: 2, H0486: 2, H0013: 2, H0581: 2, L0471: 2, L0764: 2, L0794: 2, L0666: 2, |

HNOK189	HNOK189R	1323	2 - 370	3498	Glu-1 to Pro-7, Asp-25 to Leu-31, Arg-54 to Lys-73.	L0663: 2, H0520: 2, H0660: 2, H0436: 2, L0740: 2, L0751: 2, H0445: 2, S0436: 2, S0400: 1, H0351: 1, H0411: 1, H0632: 1, H0575: 1, S0010: 1, H0318: 1, H0596: 1, T0110: 1, H0545: 1, H0046: 1, H0567: 1, H0073: 1, S6028: 1, H0687: 1, H0031: 1, H0553: 1, H0617: 1, H0264: 1, S0386: 1, S0440: 1, H0646: 1, L0761: 1, L0646: 1, L0771: 1, L0662: 1, L0774: 1, L0805: 1, L0653: 1, L0655: 1, L0664: 1, H0519: 1, H0521: 1, H0478: 1, L0756: 1, L0752: 1, L0759: 1, S0434: 1, L0362: 1, S0192: 1 and H0543: 1.	
HNOKN33	HNOKN33R	1324	57 - 284	3499	Pro-7 to Gly-20.		L0751: 9, H0556: 8, H0617: 8, L0777: 6,

L0809: 5, L0741: 5,
L0754: 5, L0779: 5,
S0222: 4, L0769: 4,
L0659: 4, L0438: 4,
L0748: 4, H0208: 3,
H0052: 3, H0009: 3,
S0051: 3, T0010: 3,
H0521: 3, L0747: 3,
L0731: 3, L0758: 3,
S0408: 2, S0476: 2,
H0575: 2, H0253: 2,
H0545: 2, H0687: 2,
H0615: 2, H0181: 2,
H0135: 2, H0494: 2,
L5566: 2, L0666: 2,
L0664: 2, L0565: 2,
H0445: 2, S6024: 1,
S0134: 1, S0001: 1,
S0282: 1, S0400: 1,
H0459: 1, S0354: 1,
S0360: 1, H0580: 1,
S0007: 1, H0639: 1,
S0278: 1, H0441: 1,
H0370: 1, H0438: 1,
S0280: 1, H0036: 1,
H0618: 1, S0049: 1,
H0196: 1, H0235: 1,
H0597: 1, H0231: 1,
H0327: 1, H0566: 1,
H0024: 1, L0163: 1,

H0594: 1, H0424: 1, H0213: 1, H0030: 1, H0031: 1, H0598: 1, H0100: 1, L0351: 1, H0560: 1, H0625: 1, H0561: 1, H0633: 1, S0144: 1, S0002: 1, S0426: 1, L0763: 1, L0770: 1, L0772: 1, L0372: 1, L0645: 1, L0662: 1, L0767: 1, L0651: 1, L0378: 1, L0776: 1, L0657: 1, L0783: 1, L0382: 1, L0663: 1, S0052: 1, H0520: 1, H0547: 1, H0670: 1, S0378: 1, S0380: 1, H0522: 1, H0555: 1, S3014: 1, L0743: 1, L0756: 1, L0753: 1, L0759: 1, S0031: 1, S0434: 1, L0581: 1, L0595: 1, L0366: 1 and H0423: 1.	L0665: 14, L0666: 13, L0662: 10, L0659: 10, L0646: 9, L0655: 7, L0663: 7, H0648: 7, L0775: 6, L0717: 5, L0657: 5, H0436: 5,	3500	67 - 171	1325	HNOKO45R
					HNOKO45

L0756: 5, L0731: 5,
L0766: 4, L0748: 4,
S0212: 3, L0598: 3,
L0637: 3, L0761: 3,
L0664: 3, H0658: 3,
L0742: 3, L0439: 3,
L0747: 3, L0750: 3,
L0755: 3, L0758: 3,
L0604: 3, L0595: 3,
H0686: 2, L0002: 2,
S0376: 2, S0360: 2,
S6026: 2, H0351: 2,
S0222: 2, H0455: 2,
L0471: 2, H0014: 2,
T0006: 2, S0440: 2,
S0422: 2, L0667: 2,
L0641: 2, L0764: 2,
L0768: 2, L0774: 2,
L0776: 2, L0527: 2,
L0636: 2, L0783: 2,
S0374: 2, H0539: 2,
L0749: 2, L0596: 2,
L0589: 2, L0591: 2,
L0592: 2, L0599: 2,
L0594: 2, L0362: 2,
H0170: 1, S0218: 1,
H0657: 1, H0656: 1,
L0808: 1, S0400: 1,
H0402: 1, S0442: 1,
S0444: 1, S0408: 1,

H0549: 1, H0441: 1,
H0415: 1, H0587: 1,
L0622: 1, H0486: 1,
T0039: 1, H0156: 1,
H0318: 1, H0173: 1,
H0196: 1, H0597: 1,
L0041: 1, H0011: 1,
H0057: 1, H0373: 1,
H0051: 1, S0051: 1,
T0010: 1, H0399: 1,
H0061: 1, H0687: 1,
H0328: 1, L0055: 1,
H0673: 1, H0551: 1,
H0413: 1, T0041: 1,
H0649: 1, UNKWN: 1,
L0762: 1, L0763: 1,
L0371: 1, L0769: 1,
L0373: 1, L0521: 1,
L0364: 1, L0649: 1,
L0803: 1, L0650: 1,
L0378: 1, L0653: 1,
L0606: 1, L0607: 1,
L0661: 1, L0512: 1,
L0656: 1, L4669: 1,
L0517: 1, L0526: 1,
L0809: 1, L0647: 1,
L2269: 1, L0438: 1,
H0519: 1, H0659: 1,
H0660: 1, H0651: 1,
S0328: 1, S0380: 1,

HNOKT24	HNOKT24R	1326	98 - 457	3501	Lys-1 to Glu-6, Pro-8 to Gln-21, Ser-43 to Glu-51, Val-61 to Gly-68, Arg-75 to Pro-87, Ser-92 to Phe-98.	H0710: 1, H0579: 1, S0404: 1, S0406: 1, L0740: 1, L0754: 1, L0777: 1, L0759: 1, S0308: 1, L0605: 1, L0581: 1, L0608: 1, L0601: 1, H0543: 1, S0412: 1, S0424: 1 and H0506: 1.
HNOKU52	HNOKU52R	1327	3 - 509	3502	Lys-13 to Ser-41, Lys-57 to Lys-66, Lys-89 to Lys-97, Lys-113 to Ala-118, Pro-131 to Ala-147, Ala-159 to Ala-169.	
HNOKV82	HNOKV82R	1328	3 - 488	3503	Lys-24 to Lys-31, Gly-132 to Glu-137.	
HNOKZ03	HNOKZ03R	1329	216 - 401	3504		H0624: 10, S0192: 8, S0022: 7, S0212: 5, H0031: 4, H0412: 4, S0028: 4, L0747: 4, S0194: 4, H0717: 3, H0427: 3, L0471: 3, S0250: 3, H0039: 3.

H0644: 3, H0040: 3, I10059: 3, H0144: 3, H0547: 3, S0126: 3, S0037: 3, S0027: 3, S0206: 3, L0439: 3, H0713: 2, H0661: 2, S0360: 2, H0208: 2, S0045: 2, S0046: 2, H0587: 2, H0486: 2, H0575: 2, H0024: 2, H0266: 2, H0622: 2, S0551: 2, S0210: 2, H0520: 2, L0740: 2, L0731: 2, L0605: 2, H0170: 1, H0171: 1, S0040: 1, H0716: 1, H0294: 1, S0116: 1, S0420: 1, S0442: 1, H0619: 1, S0300: 1, S0592: 1, H0586: 1, H0485: 1, H0156: 1, H0590: 1, S0474: 1, S0049: 1, H0596: 1, H0544: 1, H0045: 1, H0012: 1, H0620: 1, H0014: 1, T0010: 1, H0687: 1, S0003: 1, H0615: 1, H0030: 1, S0364: 1, S0366: 1, H0090: 1, H0038: 1,

					Amino acid regions	Clones
HNORA56	HNORA56R	1330	2 - 595	3505	Leu-24 to Thr-39, Gln-70 to Glu-81, Arg-86 to Leu-98, Glu-104 to Pro-110, Pro-134 to Arg-157, Val-159 to Asn-166.	H0272: 1, H0334: 1, S0150: 1, L0598: 1, L0767: 1, L0766: 1, L0791: 1, L0792: 1, L0665: 1, T0068: 1, L0438: 1, H0660: 1, S3014: 1, L0744: 1, L0754: 1, L0749: 1, L0757: 1, L0759: 1, L0588: 1, L0589: 1, L0591: 1, L0592: 1, S0011: 1, H0665: 1, H0667: 1 and H0506: 1.
HNORB68	HNORB68R	1331	1 - 210	3506	Gly-1 to Ser-22, Pro-29 to Lys-70.	
HNORC14	HNORC14R	1332	2 - 499	3507		S0412: 22, L0662: 19, L0777: 14, S0010: 11, S0222: 9, S6028: 9, L0750: 9, T0010: 8, L0659: 8, L0747: 8, L0756: 8, L0663: 7, L0439: 7, H0051: 6, L0518: 6, L0754: 6, L0752: 6, S0280: 5.

H0575: 5, S0358: 4,
S0346: 4, L0753: 4,
H0170: 3, H0662: 3,
S0360: 3, H0427: 3,
L0471: 3, H0373: 3,
L0638: 3, L0637: 3,
L0764: 3, L0774: 3,
L0809: 3, L0666: 3,
S0310: 3, H0672: 3,
H0696: 3, L0731: 3,
H0506: 3, H0713: 2,
S0408: 2, H0411: 2,
H0455: 2, H0574: 2,
S0414: 2, H0486: 2,
H0036: 2, S0049: 2,
H0052: 2, H0327: 2,
H0687: 2, H0428: 2,
H0553: 2, H0644: 2,
H0038: 2, L0520: 2,
L0762: 2, L0770: 2,
L0653: 2, L0517: 2,
S0044: 2, L0442: 1,
H0583: 1, L0443: 1,
S0110: 1, S0282: 1,
S0400: 1, H0661: 1,
S0348: 1, S0356: 1,
S0444: 1, H0329: 1,
S0007: 1, H0619: 1,
S6026: 1, S0300: 1,
L0717: 1, S6022: 1,

H0550: 1, H0592: 1,
H0587: 1, H0599: 1,
H0042: 1, H0590: 1,
H0318: 1, H0309: 1,
H0545: 1, H0563: 1,
H0564: 1, H0123: 1,
H0019: 1, S0050: 1,
L0163: 1, S0388: 1,
H0356: 1, H0328: 1,
H0688: 1, H0039: 1,
T0023: 1, H0031: 1,
H0111: 1, H0169: 1,
S0364: 1, L0455: 1,
H0135: 1, H0163: 1,
T0067: 1, T0069: 1,
T0004: 1, H0100: 1,
S0112: 1, L0370: 1,
L0598: 1, L0769: 1,
L0630: 1, L0800: 1,
L0648: 1, L0363: 1,
L0768: 1, L0649: 1,
L0803: 1, L0775: 1,
L0375: 1, L0651: 1,
L0784: 1, L0523: 1,
L0805: 1, L0776: 1,
L0527: 1, L0657: 1,
L0635: 1, L0783: 1,
L0789: 1, L0532: 1,
L0664: 1, H0691: 1,
T0068: 1, S0148: 1,

HNORD11	HNORD11R	1333	155 - 430	3508		H0693: 1, H0520: 1, H0593: 1, H0689: 1, H0684: 1, S0330: 1, S0380: 1, S0174: 1, H0555: 1, L0612: 1, L0743: 1, L0748: 1, L0751: 1, L0749: 1, L0779: 1, L0759: 1, L0689: 1, S0434: 1, L0604: 1, L0366: 1, S0106: 1 and S0021: 1.
HNORE65	HNORE65R	1334	2 - 436	3509	Ala-24 to Lys-29, Lys-51 to Gly-62.	H0585: 20, H0641: 14, H0521: 9, H0141: 5, H0031: 5, H0422: 5, H0644: 4, L0755: 4, H0295: 3, H0638: 3, S0376: 3, H0544: 3, S0440: 3, H0689: 3, H0690: 3, L0757: 3, H0657: 2, S0360: 2, H0586: 2, H0581: 2, H0063: 2, S0144: 2, L0662: 2, H0691: 2, H0520: 2, S0126: 2, H0522: 2, L0740: 2, L0777: 2, H0423: 2, S0298: 1, H0306: 1, S0132: 1, S0278: 1, H0549: 1, S0222: 1,

| HNORF03 | HNORF03R | 1335 | 37 - 387 | 3510 | Pro-19 to His-36, Glu-68 to Ala-86. | H0587: 1, H0333: 1, H0575: 1, H0706: 1, H0052: 1, H0309: 1, H0596: 1, H0546: 1, H0545: 1, H0086: 1, H0009: 1, H0284: 1, T0023: 1, L0143: 1, H0551: 1, H0494: 1, S0438: 1, S0002: 1, L0371: 1, L0770: 1, L0769: 1, L0667: 1, L0372: 1, L0646: 1, L0553: 1, L0771: 1, L0774: 1, L0375: 1, L0806: 1, L0382: 1, H0703: 1, H0593: 1, H0682: 1, S0328: 1, S0380: 1, H0555: 1, S0027: 1, L0742: 1, L0747: 1, L0779: 1, L0753: 1, H0445: 1 and H0543: 1. | L0439: 6, L0794: 2, L0665: 2, H0691: 2, L0717: 1, H0068: 1, L0761: 1, L0646: 1, L0773: 1, L0662: 1, L0790: 1, L0663: 1, L0438: 1, L0748: 1, L0758: 1, L0592: 1 and |

HNORF04	HNORF04R	1336	1 - 168	3511		L0608: 1.
HNORF05	HNORF05R	1337	2 - 334	3512	Thr-2 to Phe-7, Gly-18 to Arg-23, Asp-27 to Glu-35.	S0358: 7, L0750: 7, S0360: 6, H0617: 5, S0126: 4, H0545: 3, L0776: 3, S0374: 3, L0748: 3, L0755: 3, L0588: 3, H0422: 3, H0685: 2, H0549: 2, H0550: 2, H0632: 2, H0546: 2, H0424: 2, H0163: 2, H0551: 2, L0665: 2, H0593: 2, H0660: 2, S0330: 2, L0747: 2, L0749: 2, L0777: 2, L0757: 2, S0031: 2, H0556: 1, H0686: 1, H0295: 1, S0430: 1, H0657: 1, H0341: 1, H0662: 1, S0278: 1, H0282: 1, H0592: 1, H0586: 1, H0486: 1, T0039: 1, T0109: 1, H0004: 1, H0581: 1, H0309: 1, H0596: 1, T0110: 1.
HNORF13	HNORF13R	1338	1 - 636	3513	Gly-1 to Thr-10.	
HNORH03	HNORH03R	1339	3 - 680	3514		

| HNORH05 | HNORH05R | 1340 | 1 - 498 | 3515 | Arg-13 to Arg-21, Asp-26 to Pro-35, | H0231: 1, H0123: 1, H0620: 1, H0083: 1, H0594: 1, H0687: 1, L0483: 1, H0644: 1, H0361: 1, H0087: 1, H0413: 1, H0059: 1, H0494: 1, S0306: 1, S0440: 1, H0509: 1, H0529: 1, L0762: 1, L0770: 1, L0769: 1, L0372: 1, L0764: 1, L0771: 1, L0773: 1, L0775: 1, L0375: 1, L0556: 1, L0655: 1, L0807: 1, L0656: 1, L0659: 1, L0540: 1, L0783: 1, L0384: 1, S0216: 1, H0144: 1, H0691: 1, H0690: 1, H0684: 1, H0658: 1, H0670: 1, H0672: 1, S0328: 1, S0378: 1, S0380: 1, H0518: 1, H0555: 1, S3014: 1, S0032: 1, L0741: 1, H0445: 1, L0596: 1, S0192: 1, S0194: 1, S0460: 1 and H0352: 1. |

HNORH35	HNORH35R	1341	20 - 244	3516	Glu-58 to Gly-65, Ser-74 to Pro-82, Gln-107 to Asp-115, Asp-128 to Asn-137, Gln-145 to Arg-154, Gln-161 to Ser-166.	
HNORJ08	HNORJ08R	1342	3 - 377	3517	Ala-19 to Ser-27, Ser-41 to Val-53.	
HNTRB70	HNTRB70R	1343	144 - 377	3518	Asn-95 to Leu-100. Pro-3 to Ile-12, Asn-20 to Glu-25.	
HOCMA02	HOCMA02R A	1344	3 - 530	3519	Ile-121 to Val-129, Ala-136 to Glu-142.	L0742: 10, H0144: 6, H0265: 5, S0116: 4, S0046: 4, S0222: 4, H0556: 3, H0250: 3, H0052: 3, S0027: 3, L0595: 3, S0212: 2, H0306: 2, S0358: 2, H0013: 2, H0618: 2, H0124: 2, H0100: 2, S0053: 2, H0660: 2, S0330: 2, S3012: 2, L0748: 2, L0439: 2, L0745: 2, L0757: 2, H0445: 2, S0342: 1, H0484: 1, H0638: 1, S0007: 1, H0393: 1, H0437: 1, H0549: 1, H0438: 1, H0486: 1,

| HOCMB45 | HOCMB45RA | 1345 | 347 - 541 | 3520 | Asn-39 to Gln-44, Leu-47 to Asp-55. | L0439: 17, L0438: 6, H0424: 5, S0007: 4, L0769: 4, H0213: 3, | H0253: 1, H0390: 1, H0544: 1, H0046: 1, H0009: 1, H0023: 1, N0007: 1, T0010: 1, H0188: 1, H0687: 1, S0003: 1, H0030: 1, S0364: 1, L0455: 1, S0366: 1, H0090: 1, H0038: 1, H0551: 1, H0412: 1, H0059: 1, S0038: 1, H0130: 1, H0641: 1, S0142: 1, S0002: 1, H0517: 1, L0643: 1, L0771: 1, L0794: 1, L0766: 1, L0775: 1, L0654: 1, L0655: 1, L0352: 1, S0008: 1, H0455: 1, H0659: 1, H0658: 1, H0672: 1, H0521: 1, H0522: 1, S0044: 1, H0576: 1, L0779: 1, L0605: 1, L0593: 1, S0026: 1, H0667: 1, S0276: 1, S0196: 1, H0542: 1, H0423: 1 and H0506: 1. |

HOCMB65	HOCMB65R A	1346	241 - 456	3521		L0776: 3, H0660: 3, H0309: 2, S0051: 2, L0789: 2, L0663: 2, L0750: 2, L0757: 2, L0759: 2, S0196: 2, S0040: 1, S0001: 1, H0662: 1, H0402: 1, L0005: 1, S0356: 1, H0052: 1, H0596: 1, H0009: 1, T0010: 1, L0483: 1, T0006: 1, H0033: 1, H0031: 1, H0169: 1, H0634: 1, H0538: 1, L0638: 1, L0643: 1, L0764: 1, L0768: 1, L0803: 1, L0804: 1, L0375: 1, L0606: 1, L0659: 1, L0791: 1, L0352: 1, H0547: 1, L0602: 1, L0749: 1, L0777: 1, L0752: 1, L0731: 1, L0758: 1, S0394: 1, L0596: 1 and S0412: 1.
HOCMC08	HOCMC08R	1347	1 - 426	3522	Lys-18 to Tyr-31, Ile-45 to Asp-50, Trp-78 to Ser-88,	

| HOCMF06 | HOCMF06R | 1348 | 382 - 588 | 3523 | Pro-102 to Pro-109. | |
| HOCMF27 | HOCMF27R | 1349 | 3 - 395 | 3524 | Glu-1 to Ile-6, Asp-125 to Pro-131. | L0748: 26, H0046: 18, H0510: 7, H0673: 7, L0803: 7, H0169: 6, H0144: 6, L0731: 4, H0574: 3, H0521: 3, H0370: 2, H0615: 2, H0032: 2, T0067: 2, H0509: 2, S0210: 2, L0776: 2, L0749: 2, L0750: 2, L0595: 2, H0170: 1, H0656: 1, H0341: 1, H0151: 1, S0046: 1, S0132: 1, H0619: 1, H0351: 1, S0222: 1, H0497: 1, H0632: 1, H0486: 1, H0156: 1, H0575: 1, H0052: 1, H0596: 1, H0057: 1, H0014: 1, H0355: 1, H0286: 1, H0622: 1, H0165: 1, H0674: 1, H0212: 1, H0038: 1, H0379: 1, H0059: 1, T0041: 1, S0448: 1, H0132: 1, S0150: 1, L0646: 1, L0774: 1, L0527: 1, L0657: 1, L0809: 1, |

HOCMF50	HOCMF50RB	1350	49 - 354	3525	Gly-2 to Lys-9, Arg-21 to Glu-32, Pro-58 to Lys-64, Thr-73 to Glu-83.	H0687: 1, L0663: 1 and H0660: 1.	L0519: 1, L0788: 1, L0789: 1, L0666: 1, H0520: 1, H0519: 1, H0658: 1, H0660: 1, S0152: 1, S0013: 1, H0696: 1, S0044: 1, S0174: 1, S0146: 1, H0479: 1, L0744: 1, L0777: 1, L0758: 1, L0581: 1, L0608: 1, L0593: 1 and H0136: 1.
HOCMF54	HOCMF54R	1351	37 - 285	3526	Lys-1 to Thr-6, Ala-26 to Gly-36, Ser-47 to Gln-55, Leu-72 to Cys-83.		L0794: 7, L0666: 4, L0750: 3, L0664: 2, L0665: 2, H0670: 2, H0660: 2, L0439: 2, L0751: 2, L0756: 2, H0650: 1, H0150: 1, L0769: 1, L0803: 1, L0378: 1, L0657: 1, H0684: 1 and H0555: 1.
HOCMG37	HOCMG37R	1352	1 - 456	3527	Gly-1 to Asn-9, Glu-31 to Val-39.		H0657: 13, S0360: 12, S0026: 7, H0547: 6, H0171: 4, S0356: 4, H0551: 4, H0560: 4, H0509: 4, H0689: 4, H0543: 4, S0358: 3.

H0318: 3, S0440: 3,
H0529: 3, H0435: 3,
H0665: 3, H0170: 2,
H0265: 2, H0556: 2,
H0222: 2, S0376: 2,
L0717: 2, H0642: 2,
H0574: 2, H0575: 2,
H0596: 2, S0003: 2,
H0615: 2, H0428: 2,
H0617: 2, H0413: 2,
H0494: 2, H0646: 2,
L0369: 2, H0144: 2,
H0520: 2, H0519: 2,
H0690: 2, H0658: 2,
H0600: 2, H0672: 2,
L0362: 2, H0542: 2,
H0423: 2, H0686: 1,
H0650: 1, H0656: 1,
S0212: 1, S0029: 1,
H0483: 1, H0663: 1,
H0664: 1, H0638: 1,
S0420: 1, H0580: 1,
S0278: 1, H0261: 1,
H0438: 1, H0586: 1,
T0060: 1, H0069: 1,
S0010: 1, H0263: 1,
H0327: 1, H0546: 1,
H0014: 1, H0083: 1,
H0510: 1, S6028: 1,
H0266: 1, S0214: 1,

HOCMI62	HOCMI62R	1353	49 - 348	3528		H0553: 1, H0068: 1, H0090: 1, H0040: 1, H0634: 1, T0067: 1, H0079: 1, H0561: 1, L0065: 1, H0130: 1, H0647: 1, S0422: 1, L0772: 1, L0648: 1, L0662: 1, L0768: 1, L0375: 1, L0657: 1, L0659: 1, L0518: 1, S0310: 1, L0438: 1, H0670: 1, H0648: 1, S0380: 1, H0521: 1, H0436: 1, L0439: 1, L0749: 1, L0756: 1, L0779: 1, L0731: 1, H0343: 1, L0596: 1, L0588: 1, L0590: 1, L0591: 1, L0603: 1, H0653: 1, S0196: 1, H0422: 1, S0424: 1, S0384: 1 and H0506: 1.
HOCMJ47	HOCMJ47R	1354	1 - 510	3529	Lys-23 to Ser-29, Tyr-55 to His-62, Tyr-65 to Leu-71.	
HOCMK20	HOCMK20R	1355	14 - 400	3530	Glu-32 to Ser-38.	
HOCML06	HOCML06R	1356	3 - 707	3531	Gly-1 to Arg-9.	
HOCML66	HOCML66R	1357	2 - 289	3532		L0748: 2, S6028: 1, H0682: 1, H0660: 1,

HOCMM52	HOCMM52R	1358	130 - 594	3533	Thr-19 to Cys-25, Lys-133 to Ala-138.	S0378: 1 and H0506: 1.
HOCMO50	HOCMO50R	1359	3 - 425	3534		H0295: 8, H0617: 7, L0665: 7, H0435: 7, H0592: 6, H0494: 6, L0439: 6, L0751: 6, S0360: 5, S0046: 4, H0587: 4, H0012: 4, H0264: 4, L0662: 4, S0406: 4, H0586: 3, H0620: 3, H0031: 3, H0551: 3, S0440: 3, S0002: 3, L0763: 3, L0648: 3, L0649: 3, L0774: 3, L0659: 3, H0520: 3, H0547: 3, H0689: 3, H0660: 3, S0328: 3, S0330: 3, L0748: 3, L0754: 3, L0750: 3, H0294: 2, H0650: 2, H0341: 2, S0356: 2, S0132: 2, H0370: 2, H0333: 2, L0643: 2, L0623: 2, H0706: 2, H0081: 2, H0039: 2, H0553: 2, H0181: 2, H0068: 2, H0135: 2, H0040: 2
HOCMS75	HOCMS75R	1360	3 - 500	3535		

H0646: 2, L0640: 2,
L0637: 2, L0641: 2,
L0764: 2, L0804: 2,
L0806: 2, L0776: 2,
L0657: 2, L0809: 2,
L0664: 2, H0519: 2,
H0682: 2, H0670: 2,
H0672: 2, L0744: 2,
L0740: 2, S0434: 2,
H0677: 2, H0483: 1,
H0305: 1, H0638: 1,
S0442: 1, S0358: 1,
S0376: 1, S0410: 1,
H0411: 1, H0550: 1,
H0455: 1, H0600: 1,
H0101: 1, H0575: 1,
H0590: 1, H0618: 1,
H0052: 1, H0234: 1,
H0597: 1, H0121: 1,
L0041: 1, H0123: 1,
H0246: 1, H0290: 1,
H0292: 1, H0428: 1,
H0622: 1, T0023: 1,
H0030: 1, H0316: 1,
H0059: 1, H0100: 1,
S0306: 1, T0090: 1,
H0649: 1, S0210: 1,
S0426: 1, L0646: 1,
L0765: 1, L0771: 1,
L0626: 1, L0768: 1,

| HOCMS87 | HOCMS87R | 1361 | 145 - 636 | 3536 | Pro-84 to Pro-91 | L0364: 1, L0766: 1, L0375: 1, L0651: 1, L0378: 1, L0653: 1, L0655: 1, L0558: 1, L0635: 1, L0518: 1, L0383: 1, L0792: 1, L0663: 1, S0006: 1, H0696: 1, S0044: 1, S3014: 1, L0743: 1, L0752: 1, L0755: 1, L0731: 1, L0759: 1, H0216: 1, H0543: 1, S0424: 1 and H0506: 1. | L0743: 9, H0551: 5, H0645: 4, H0050: 4, S0250: 4, S0192: 4, H0624: 3, T0039: 3, H0087: 3, H0547: 3, L0439: 3, H0294: 2, H0370: 2, T0040: 2, H0620: 2, H0024: 2, H0622: 2, H0424: 2, H0031: 2, H0063: 2, L0662: 2, L0776: 2, S0028: 2, L0757: 2, S0242: 2, S0116: 1, H0484: 1, H0483: 1, S0360: 1, H0619: 1, H0550: 1, H0586: 1, H0497: 1, H0486: 1, |

HOCMX29	HOCMX29R	1362	86 - 235	3537		H0599:1, H0575:1, H0122:1, H0706:1, H0421:1, S0049:1, H0086:1, H0123:1, H0081:1, H0012:1, H0687:1, H0028:1, H0604:1, S0386:1, L0772:1, L0648:1, L0803:1, L0774:1, L0375:1, L0789:1, L0532:1, L0663:1, T0068:1, S0126:1, H0684:1, H0660:1, S0152:1, S0027:1, L0747:1, L0749:1, L0779:1, L0777:1, S0194:1 and H0506:1.
HOCMY53	HOCMY53R	1363	76 - 354	3538	Glu-1 to Gly-6, Leu-27 to Val-40, Glu-60 to Asn-67.	
HOCMY61	HOCMY61R	1364	2 - 466	3539		
HOCMY79	HOCMY79R	1365	314 - 511	3540	Gly-17 to Arg-42, Phe-56 to Ser-66.	
HOCOC38	HOCOC38R	1366	394 - 2	3541		
HOCOC41	HOCOC41R	1367	520 - 789	3542	Lys-1 to His-6.	
HOCOC94	HOCOC94R	1368	3 - 488	3543	Lys-7 to Glu-13, Gly-39 to Thr-44, Gly-82 to Ile-89, Glu-98 to Asn-105.	L0777:14, L0731:10, L0740:8, L0439:7, L0754:6, S0222:5, H0144:5, L0745:5,

H0013: 4, L0770: 4,
S0380: 4, L0748: 4,
L0758: 4, H0171: 3,
H0599: 3, S0010: 3,
H0052: 3, S0003: 3,
H0615: 3, L0598: 3,
L0666: 3, L0665: 3,
H0519: 3, H0658: 3,
L0749: 3, H0255: 2,
S0376: 2, S0444: 2,
S0360: 2, H0632: 2,
H0327: 2, S0214: 2,
H0038: 2, H0040: 2,
L0769: 2, L0638: 2,
L0662: 2, L0794: 2,
L0775: 2, L0776: 2,
H0660: 2, S0330: 2,
L0744: 2, L0750: 2,
L0756: 2, L0757: 2,
L0362: 2, L0361: 2,
H0170: 1, H0685: 1,
S0040: 1, S0342: 1,
H0716: 1, S0001: 1,
S0282: 1, H0662: 1,
S0356: 1, S0358: 1,
H0675: 1, S0408: 1,
H0580: 1, S0300: 1,
H0406: 1, S0278: 1,
H0550: 1, H0441: 1,
H0431: 1, H0600: 1,

H0331: 1, H0574: 1,
T0039: 1, H0156: 1,
S0665: 1, S0346: 1,
H0263: 1, H0596: 1,
H0546: 1, H0150: 1,
H0009: 1, H0569: 1,
L0471: 1, H0012: 1,
H0051: 1, S0051: 1,
T0010: 1, H0266: 1,
S0250: 1, S0022: 1,
H0428: 1, H0119: 1,
H0553: 1, H0628: 1,
H0617: 1, H0316: 1,
H0634: 1, H0412: 1,
H0413: 1, H0623: 1,
H0494: 1, S0450: 1,
H0130: 1, S0142: 1,
UNKWN: 1, L0771: 1,
L0766: 1, L0803: 1,
L0804: 1, L0774: 1,
L0784: 1, L0805: 1,
L0652: 1, L0653: 1,
L0655: 1, L0606: 1,
L0527: 1, L0783: 1,
L0663: 1, H0547: 1,
H0689: 1, H0670: 1,
H0648: 1, H0539: 1,
H0521: 1, H0696: 1,
H0478: 1, S0432: 1,
H0540: 1, S0028: 1,

HOCOF35	HOCOF35R	1369	221 - 502	3544	Pro-6 to Arg-12, Gln-17 to Leu-22, His-25 to Asp-32, Gly-62 to Lys-69.		S0206: 1, L0746: 1, L0747: 1, S0031: 1, L0689: 1, S0436: 1, S0194: 1, S0276: 1, S0412: 1, H0506: 1 and H0352: 1.
HOCOF50	HOCOF50R	1370	2 - 409	3545	Thr-16 to Phe-28, Cys-58 to Ser-69, Glu-91 to Glu-99, Lys-113 to Gln-119.		
HOCOO62	HOCOO62R	1371	9 - 539	3546	Gln-37 to Trp-44, Arg-47 to Phe-57, Phe-67 to Ala-83, Pro-94 to Gly-99, Lys-109 to Cys-116, Arg-130 to Ser-137.		
HOCOP52	HOCOP52R	1372	2 - 382	3547			
HOCOQ13	HOCOQ13R	1373	46 - 492	3548	Glu-1 to Val-9.		H0521: 5, S0040: 3, H0039: 3, H0657: 2, H0341: 2, H0553: 2, S0210: 2, H0593: 2, H0445: 2, L0596: 2, S0212: 1, H0661: 1, S0418: 1, S0354: 1, S0358: 1, H0592: 1, T0039: 1, H0635: 1.

HOCOQ93	HOCOQ93R	1374	448 - 639	3549		H0427: 1, H0544: 1, H0546: 1, H0545: 1, H0046: 1, L0471: 1, H0083: 1, S6028: 1, S0338: 1, S0003: 1, H0068: 1, H0038: 1, H0063: 1, H0551: 1, H0100: 1, T0042: 1, H0494: 1, H0561: 1, H0046: 1, L0800: 1, L0649: 1, L0654: 1, L0666: 1, H0660: 1, H0518: 1, S0152: 1, S0146: 1, H0555: 1, S0037: 1, S0028: 1, L0605: 1, L0599: 1, L0603: 1, H0667: 1, H0542: 1, H0543: 1, S0424: 1 and H0506: 1.
HOCOT70	HOCOT70R	1375	2 - 412	3550		
HOCOV29	HOCOV29R	1376	107 - 268	3551	Lys-9 to Asp-16, Thr-27 to Trp-36.	
HOCPF69	HOCPF69R	1377	1 - 573	3552		
HOCPG38	HOCPG38R	1378	1 - 183	3553	Pro-38 to Gln-43.	H0046: 5, H0144: 5, L0665: 4, L0662: 3, L0766: 3, L0750: 3, L0779: 3, L0759: 3, H0170: 2, S0376: 2, H0329: 2, H0427: 2,

L0770: 2, L0529: 2,
L0439: 2, L0740: 2,
L0751: 2, L0758: 2,
S0242: 2, H0223: 1,
H0685: 1, S0116: 1,
S0282: 1, H0662: 1,
S6022: 1, H0574: 1,
H0486: 1, H0013: 1,
H0098: 1, H0575: 1,
H0581: 1, H0052: 1,
L0471: 1, H0024: 1,
H0510: 1, H0594: 1,
H0328: 1, H0169: 1,
H0598: 1, H0163: 1,
H0646: 1, L0637: 1,
L0768: 1, L0794: 1,
L0804: 1, L0775: 1,
L0653: 1, L0659: 1,
L0526: 1, L0783: 1,
L0809: 1, L0544: 1,
L0647: 1, L0666: 1,
L0664: 1, S0374: 1,
L0438: 1, H0519: 1,
H0670: 1, H0660: 1,
H0648: 1, S0378: 1,
H0696: 1, S0432: 1,
L0777: 1, L0755: 1,
S0308: 1, L0591: 1,
L0608: 1, S0192: 1,
S0194: 1, H0543: 1,

HOCPG48	HOCPG48R	1379	39 - 185	3554		
HOCPH40	HOCPH40R	1380	2 - 217	3555	Leu-9 to Val-14, Glu-41 to Ala-49.	H0423: 1 and S0412: 1. L0731: 7, S0358: 6, L0439: 6, L0769: 5, L0809: 4, L0747: 4, S0354: 3, H0580: 3, H0438: 3, H0581: 3, L0770: 3, L0766: 3, L0774: 3, L0775: 3, L0740: 3, L0749: 3, L0758: 3, L0596: 3, H0677: 3, H0392: 2, H0457: 2, L0471: 2, H0510: 2, H0169: 2, H0551: 2, T0042: 2, H0494: 2, S0438: 2, L0761: 2, L0657: 2, L0783: 2, L0647: 2, L0666: 2, L0565: 2, L0438: 2, H0521: 2, L0748: 2, L0750: 2, L0779: 2, L0752: 2, L0759: 2, L0588: 2, L0605: 2, L0592: 2, L0581: 2, L0615: 1, S0116: 1, H0638: 1, S0418: 1, S0444: 1, S0360: 1, S0222: 1, H0586: 1, H0427: 1, H0618: 1, H0390: 1,

HOCPH44	HOCPH44R	1381	3 - 281	3556	Gly-18 to Asp-23, Gln-34 to Gly-40, Asp-81 to Lys-87.	H0318: 1, H0007: 1, H0052: 1, H0544: 1, H0024: 1, H0014: 1, H0083: 1, H0375: 1, S6028: 1, H0266: 1, H0398: 1, L0055: 1, H0135: 1, H0087: 1, S0344: 1, S0426: 1, H0529: 1, L0763: 1, L0639: 1, L0374: 1, L0764: 1, L0662: 1, L0768: 1, L0803: 1, L0378: 1, L0776: 1, L0659: 1, L0518: 1, L0663: 1, L0665: 1, S0374: 1, H0547: 1, H0519: 1, H0593: 1, H0690: 1, H0682: 1, H0660: 1, S0328: 1, H0539: 1, H0555: 1, L0743: 1, L0777: 1, H0445: 1, L0362: 1, S0242: 1 and H0543: 1.
HOCP128	HOCP128R	1382	3 - 245	3557		
HOCP153	HOCP153R	1383	2 - 232	3558	Asp-43 to Gly-48.	
HOCPL59	HOCPL59R	1384	285 - 530	3559		
HOCPM39	HOCPM39R	1385	2 - 136	3560		

| HOCPP65 | HOCPP65R | 1386 | 3 - 275 | 3561 | Ala-2 to Ala-9. | L0747: 10, L0805: 6, S0358: 4, L0775: 4, L0655: 4, L0749: 4, H0656: 3, S0440: 3, L0803: 3, L0776: 3, L0789: 3, H0650: 2, H0662: 2, L0471: 2, H0620: 2, H0169: 2, H0616: 2, L0770: 2, L0769: 2, L0761: 2, L0800: 2, L0794: 2, L0804: 2, L0806: 2, L0657: 2, L0809: 2, L0665: 2, H0547: 2, S0126: 2, H0660: 2, H0648: 2, H0521: 2, S0406: 2, L0748: 2, L0750: 2, L0758: 2, L0581: 2, T0002: 1, H0686: 1, H0657: 1, S0418: 1, S0420: 1, S0356: 1, S0442: 1, S0444: 1, H0574: 1, H0559: 1, H0486: 1, L0586: 1, T0114: 1, H0250: 1, H0318: 1, H0014: 1, H0051: 1, H0266: 1, H0292: 1, H0428: 1, H0031: 1, H0673: 1, H0163: 1, |

HOCPP80	HOCPP80R	1387	3 – 587	3562	Glu-16 to Lys-21, Asn-62 to Arg-68, Asp-94 to Thr-102, Gly-161 to Leu-170.	H0591: 1, H0494: 1, L0640: 1, L0763: 1, L0772: 1, L0773: 1, L0521: 1, L0766: 1, L0774: 1, L0375: 1, L0384: 1, L0793: 1, H0144: 1, H0703: 1, S0374: 1, H0593: 1, H0690: 1, H0659: 1, H0658: 1, S0328: 1, S0152: 1, L0744: 1, L0779: 1, L0752: 1, L0755: 1, L0731: 1, L0759: 1, S0026: 1, H0136: 1, H0542: 1 and H0422: 1.
HOCPQ24	HOCPQ24R	1388	26 – 358	3563		
HOCPQ59	HOCPQ59R	1389	2 – 394	3564	Ser-9 to Glu-16, Phe-49 to Tyr-58, Asn-102 to Gly-110.	L0754: 4, H0290: 2, L0761: 2, L0794: 2, L0766: 2, L0793: 2, L0731: 2, L0758: 2, L0759: 2, L0594: 2, H0713: 1, H0402: 1, S0418: 1, S0354: 1, H0580: 1, L0717: 1, H0550: 1, H0333: 1,

HOCPQ66	HOCPQ066R	1390	2 - 427	3565	Asp-24 to Leu-31, Ile-123 to Gln-128.	H0643: 1, H0574: 1, S0280: 1, H0618: 1, H0052: 1, H0546: 1, H0545: 1, H0014: 1, H0033: 1, H0100: 1, L5566: 1, L0773: 1, L0521: 1, L0803: 1, L0804: 1, L0807: 1, L0788: 1, H0670: 1, H0660: 1, H0521: 1, S0404: 1, S0406: 1, H0436: 1, L0779: 1, H0543: 1 and H0352: 1.
HOCPQ75	HOCPQ75R	1391	2 - 487	3566		
HOCPR01	HOCPR01R	1392	3 - 536	3567	Ser-11 to Trp-18, Glu-43 to Leu-50, Phe-99 to Arg-120, Ser-136 to Tyr-144, Glu-154 to Cys-163.	
HOCPR29	HOCPR29R	1393	1 - 588	3568	Gln-14 to Lys-19, Glu-79 to Gly-87.	L0748: 9, H0556: 8, L0769: 5, L0766: 4, L0776: 4, H0547: 4, L0521: 4, L0750: 4, L0752: 4, L0758: 4, S0434: 4, H0542: 4, L0657: 3, S0418: 3, H0586: 3, H0587: 3, H0013: 3, H0052: 3,

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H0083: 3, H0038: 3, H0634: 3, H0494: 3, S0440: 3, L0774: 3, L0775: 3, L0659: 3, H0522: 3, L0744: 3, L0749: 3, L0755: 3, L0759: 3, H0543: 3, S0358: 2, S0476: 2, H0156: 2, H0194: 2, L0471: 2, H0014: 2, H0201: 2, S0003: 2, T0023: 2, H0135: 2, H0551: 2, S0142: 2, L0372: 2, L0662: 2, L0767: 2, L0381: 2, L0383: 2, L0666: 2, L0665: 2, H0658: 2, H0660: 2, S0044: 2, S3014: 2, L0751: 2, L0754: 2, L0596: 2, L0588: 2, L0591: 2, L0592: 2, L0595: 2, L0601: 2, H0423: 2, S0040: 1, S0134: 1, S0298: 1, H0661: 1, H0664: 1, H0125: 1, S0420: 1, S0356: 1, S0354: 1, S0444: 1, S0360: 1, H0619: 1, H0393: 1, H0549: 1,

H0550: 1, S0222: 1,
S6014: 1, H0431: 1,
H0592: 1, H0574: 1,
T0039: 1, T0114: 1,
H0075: 1, H0427: 1,
H0590: 1, H0004: 1,
H0318: 1, H0581: 1,
H0251: 1, H0596: 1,
T0115: 1, H0009: 1,
H0081: 1, H0050: 1,
H0024: 1, T0010: 1,
H0687: 1, H0288: 1,
H0290: 1, H0039: 1,
H0622: 1, L0055: 1,
H0032: 1, H0090: 1,
H0591: 1, H0040: 1,
H0063: 1, H0413: 1,
T0069: 1, S0438: 1,
H0538: 1, S0210: 1,
S0426: 1, H0529: 1,
L0520: 1, L0762: 1,
L0763: 1, L0770: 1,
L0374: 1, L0764: 1,
L0768: 1, L0386: 1,
L0803: 1, L0524: 1,
L0806: 1, L0379: 1,
L0527: 1, L0657: 1,
L0382: 1, L0809: 1,
L0788: 1, L0663: 1,
S0052: 1, S0374: 1,

HOCPR33	HOCPR33R	1394	168 - 335	3569		H0691: 1, H0682: 1, H0435: 1, H0659: 1, S0328: 1, S0330: 1, S0152: 1, H0436: 1, L0611: 1, S0027: 1, S0028: 1, L0747: 1, L0779: 1, L0780: 1, L0731: 1, L0608: 1, S0026: 1, H0653: 1, S0192: 1, S0194: 1, H0422: 1 and S0384: 1.
HOCPR53	HOCPR53R	1395	62 - 256	3570	Glu-22 to Glu-30, Lys-42 to Glu-51.	
HOCPR55	HOCPR55R	1396	3 - 440	3571	Pro-7 to Ser-36, Cys-49 to Pro-57, Pro-85 to Ala-91, Gly-97 to Pro-109.	L0766: 2, H0660: 2, L0748: 2, L0740: 2, H0328: 1, L0769: 1, L0651: 1, L0653: 1, H0593: 1 and S0126: 1.
HOCPR77	HOCPR77R	1397	1 - 279	3572		
HOCPR82	HOCPR82R	1398	1 - 102	3573		
HOCPS35	HOCPS35R	1399	3 - 203	3574	Tyr-1 to Gly-39, Ala-41 to Tyr-67.	
HOCPU03	HOCPU03R	1400	1 - 225	3575		
HOCPU30	HOCPU30R	1401	333 - 560	3576		
HOCPU68	HOCPU68R	1402	3 - 269	3577	Ser-49 to Asp-56, Arg-64 to Ile-71, Pro-80 to Ile-89.	
HOCPV29	HOCPV29R	1403	339 - 599	3578	His-10 to Asp-20.	H0620: 2, S0022: 2,

HOCPV67	HOCPV67R	1404	1 - 390	3579	Asn-27 to Gly-33.	L0438: 2, T0002: 1, H0393: 1, H0370: 1, H0050: 1, H0373: 1, H0051: 1, H0028: 1, S0036: 1, H0551: 1, H0059: 1, S0150: 1, L0662: 1, S0126: 1, H0435: 1, H0660: 1, S0044: 1 and H0694: 1.	L0803: 7, L0439: 5, L0809: 4, L0749: 4, L0776: 3, H0520: 3, L0748: 3, L0750: 3, H0543: 3, S0440: 2, L0794: 2, L0804: 2, L0438: 2, H0547: 2, H0660: 2, S0406: 2, L0743: 2, L0777: 2, L0759: 2, H0556: 1, H0656: 1, S0358: 1, S0360: 1, H0637: 1, H0580: 1, H0741: 1, H0733: 1, H0619: 1, H0415: 1, H0600: 1, H0587: 1, H0486: 1, H0013: 1, H0427: 1, S0474: 1, H0581: 1, H0263: 1, H0457: 1, H0615: 1, H0428: 1, H0644: 1, H0032: 1,

| HOCPV72 | HOCPV72R | 1405 | 3 - 209 | 3580 | | S0036: 1, H0591: 1, H0634: 1, H0264: 1, S0438: 1, S0422: 1, S0002: 1, L0520: 1, L0766: 1, L0649: 1, L0650: 1, L0774: 1, L0775: 1, L0655: 1, L0790: 1, L0666: 1, L0663: 1, H0723: 1, H0593: 1, H0682: 1, H0670: 1, H0521: 1, S0013: 1, H0631: 1, S0206: 1, L0756: 1, L0731: 1, L0608: 1, S0194: 1 and S0424: 1. |
| HOCPW56 | HOCPW56R | 1406 | 2 - 502 | 3581 | Ile-53 to Trp-63, Ala-80 to Gly-89, Arg-134 to Gln-139 | L0752: 19, L0747: 12, L0776: 6, L0750: 5, L0608: 5, L0774: 4, L0805: 4, L0438: 4, L0740: 4, S0210: 3, L0600: 3, S0358: 2, S0222: 2, H0068: 2, H0040: 2, H0413: 2, L0770: 2, L0769: 2, L0772: 2, L0794: 2, L0783: 2, L0809: 2, S0328: 2, L0439: 2, L0745: 2, L0755: 2, L0758: 2, L0590: 2. |

H0170: 1, H0341: 1, H0483: 1, S0420: 1, S0410: 1, S0300: 1, H0411: 1, H0549: 1, L0622: 1, H0013: 1, H0156: 1, S0010: 1, H0052: 1, H0545: 1, N0006: 1, L0471: 1, H0012: 1, S0336: 1, H0428: 1, T0006: 1, H0606: 1, H0674: 1, L0455: 1, S0036: 1, H0038: 1, H0063: 1, H0494: 1, H0560: 1, L0520: 1, L0762: 1, L0521: 1, L0662: 1, L0767: 1, L0803: 1, L0653: 1, L0659: 1, L0790: 1, L0791: 1, L0666: 1, H0144: 1, S0374: 1, H0689: 1, H0690: 1, H0059: 1, H0660: 1, H0648: 1, S0378: 1, H0134: 1, H0214: 1, L0749: 1, L0731: 1, L0361: 1, S0106: 1, S0011: 1, H0653: 1, S0192: 1, S0242: 1, S0194: 1 and H0422: 1.

HOCPW68	HOCPW68R	1407	1 - 297	3582		
HOCPW81	HOCPW81R	1408	2 - 694	3583	Pro-42 to Ser-59, Asp-159 to Asn-168, Tyr-196 to Gly-205.	H0046: 9, L0777: 3, S0376: 2, H0050: 2, S0344: 2, S0126: 2, H0670: 2, H0521: 2, H0542: 2, H0543: 2, H0341: 1, S0354: 1, S0358: 1, S0408: 1, H0619: 1, H0393: 1, H0592: 1, H0590: 1, S0474: 1, H0546: 1, H0551: 1, H0494: 1, S0440: 1, L0663: 1, H0660: 1, H0672: 1, H0631: 1, S0028: 1, L0757: 1, S0434: 1, L0581: 1 and L0593: 1.
HOCPX01	HOCPX01R	1409	99 - 296	3584		
HOCPY70	HOCPY70R	1410	266 - 442	3585	Glu-24 to Ser-29.	H0617: 5, L0769: 4, L0776: 4, L0751: 4, L0747: 4, L0774: 3, H0685: 2, H0657: 2, H0483: 2, H0486: 2, H0052: 2, H0674: 2, H0494: 2, L0775: 2, L0518: 2, H0682: 2, L0603: 2, H0170: 1, S6024: 1, S0116: 1, H0664: 1, H0306: 1,

HOCP276	HOCP276R	1411	2 - 460	3586	Pro-93 to Arg-99, Ser-143 to Val-149.	S0420: 1, S0376: 1, S0360: 1, S0007: 1, S0300: 1, S0222: 1, S6014: 1, H0250: 1, L0021: 1, L0022: 1, S0049: 1, H0309: 1, H0150: 1, H0009: 1, S0051: 1, H0188: 1, T0006: 1, H0604: 1, H0673: 1, H0169: 1, H0087: 1, L0065: 1, L0763: 1, L0638: 1, L0773: 1, L0662: 1, L0768: 1, L0766: 1, L0649: 1, L0651: 1, L0657: 1, L0540: 1, L0783: 1, L0809: 1, L0530: 1, L0787: 1, L0789: 1, L0665: 1, S0374: 1, S0126: 1, L0684: 1, H0660: 1, H0539: 1, S0380: 1, H0576: 1, L0741: 1, L0742: 1, L0749: 1, L0750: 1, L0779: 1, L0759: 1, S0031: 1 and L0590: 1.
HOCQA25	HOCQA25R	1412	352 - 543	3587	Ser-25 to Ser-30.	S0358: 45, S0360: 30,

S0374: 22, S0444: 21, L0662: 21, S0408: 19, L0666: 15, S0380: 14, L0664: 11, L0665: 11, S0026: 11, H0059: 10, S0328: 10, S0330: 10, H0251: 9, L0809: 8, H0670: 8, S0378: 8, H0661: 7, S0354: 7, S0440: 7, L0775: 7, L0659: 7, L0663: 7, H0672: 7, S0406: 7, S0442: 6, S0414: 6, L0657: 6, L0774: 5, H0659: 5, L0754: 5, S0434: 5, S0376: 4, L0483: 4, L0532: 4, H0547: 4, H0660: 4, L0602: 4, L0592: 4, S0460: 4, S0007: 3, H0529: 3, L0520: 3, L0803: 3, H0648: 3, S0404: 3, L0748: 3, L0747: 3, L0750: 3, L0759: 3, H0445: 3, L0608: 3, S0424: 3, H0663: 2, H0664: 2, H0580: 2, L0444: 2, H0156: 2, H0014: 2, H0615: 2, H0688: 2,

H0039: 2, H0644: 2,
H0617: 2, H0032: 2,
H0673: 2, L0763: 2,
L0646: 2, L0804: 2,
L0776: 2, H0627: 2,
L0777: 2, L0758: 2,
L0362: 2, H0506: 2,
L0615: 1, H0685: 1,
H0656: 1, L0778: 1,
L0785: 1, H0341: 1,
H0669: 1, H0662: 1,
H0402: 1, S0356: 1,
T0008: 1, S0476: 1,
H0351: 1, H0299: 1,
H0486: 1, H0013: 1,
L0021: 1, T0082: 1,
H0581: 1, H0421: 1,
H0235: 1, H0596: 1,
L0040: 1, H0178: 1,
H0563: 1, H0012: 1,
H0328: 1, H0031: 1,
H0068: 1, H0135: 1,
T0067: 1, H0264: 1,
H0488: 1, H0100: 1,
H0494: 1, S0352: 1,
S0448: 1, S0450: 1,
H0509: 1, S0472: 1,
H0647: 1, H0695: 1,
L0764: 1, L0765: 1,
L0767: 1, L0768: 1,

HOCQA26	HOCQA26R	1413	1 - 384	3588		L0364: 1, L0766: 1, L5568: 1, L0552: 1, L0376: 1, L0653: 1, L0655: 1, L0529: 1, H0144: 1, H0520: 1, H0690: 1, H0682: 1, H0684: 1, H0435: 1, H0658: 1, S0392: 1, H0478: 1, H0626: 1, H0631: 1, L0744: 1, L0751: 1, L0749: 1, L0779: 1, L0755: 1, S0308: 1, H0707: 1, L0596: 1, L0593: 1 and S0384: 1.
HOCQA37	HOCQA37R	1414	13 - 276	3589		
HOCQA86	HOCQA86R	1415	3 - 455	3590		
HOCQB18	HOCQB18R	1416	3 - 473	3591	Met-1 to Leu-6, Gly-19 to Lys-26, Ala-32 to Lys-38, Ala-89 to Leu-94, Gly-134 to Val-141.	
HOCQB48	HOCQB48R	1417	1 - 588	3592	Met-36 to Pro-42, Pro-49 to Thr-55, Leu-104 to Met-110, Trp-112 to Asn-117, Glu-122 to Tyr-134, Gln-142 to Ser-148, Leu-174 to Tyr-180.	

HOCQC57	HOCQC57R	1418	1 - 237	3593	L0766: 6, L0752: 5, L0794: 4, H0039: 3, H0622: 3, S0440: 3, L0770: 3, L0809: 3, H0547: 3, L0747: 3, S0356: 2, H0587: 2, H0427: 2, H0156: 2, H0015: 2, H0031: 2, L0771: 2, L0662: 2, L0768: 2, L0804: 2, L0659: 2, L0666: 2, L0664: 2, L0438: 2, H0660: 2, L0740: 2, L0754: 2, L0745: 2, L0749: 2, L0731: 2, L0593: 2, H0624: 1, H0657: 1, H0656: 1, H0370: 1, H0438: 1, T0040: 1, L0586: 1, T0114: 1, H0036: 1, S0010: 1, H0052: 1, H0545: 1, H0050: 1, H0014: 1, H0373: 1, L0163: 1, H0051: 1, H0071: 1, T0010: 1, H0030: 1, H0316: 1, H0598: 1, H0090: 1, S0038: 1, H0561: 1, H0509: 1, H0130: 1, H0633: 1, S0002: 1,

HOCQC71	HOCQC71R	1419	216 - 521			L0500: 1, L0761: 1, L0764: 1, L0773: 1, L0649: 1, L0375: 1, L0805: 1, L0653: 1, L0544: 1, L0545: 1, L0792: 1, L0663: 1, L0665: 1, H0670: 1, H0666: 1, H0521: 1, L0743: 1, L0439: 1, L0777: 1, L0755: 1, L0758: 1, L0596: 1, L0589: 1, L0592: 1, H0216: 1, H0542: 1, H0423: 1 and H0352: 1.
HOCQD10	HOCQD10R	1420	2 - 529	3594		
HOCQD19	HOCQD19R	1421	3 - 335	3595 3596	Thr-21 to Gly-28, Lys-36 to Gly-43, Ala-73 to His-85. Gly-70 to Gly-79.	
HOCQD38	HOCQD38R	1422	290 - 550	3597		H0556: 2, H0519: 2, S0116: 1, H0370: 1, H0063: 1, L0800: 1, L0803: 1, L0383: 1, L0789: 1, H0593: 1, L0659: 1, H0660: 1, L0777: 1 and H0665: 1. L0748: 49, L0766: 22, H0457: 12, L0439: 12, H0581: 11, L0659: 11, L0754: 11, L0745: 10, L0662: 9, L0665: 9,

H0710: 9, H056c: 8,
L0666: 8, H0521: 8,
L0751: 8, L0758: 8,
L0592: 8, H0486: 7,
H0318: 7, L0774: 7,
L0664: 7, S0360: 6,
L0510: 6, L0731: 6,
H0423: 6, H0638: 5,
H0580: 5, H0427: 5,
H0050: 5, H0271: 5,
L0800: 5, H0670: 5,
L0552: 5, L0581: 5,
H0506: 5, H0402: 4,
S0358: 4, H0179: 4,
L0768: 4, L0803: 4,
L0438: 4, H0547: 4,
H0658: 4, S0328: 4,
H0555: 4, H0436: 4,
L0747: 4, L0750: 4,
L0777: 4, L0759: 4,
L0593: 4, S0134: 3,
H0657: 3, H0663: 3,
H0305: 3, S0420: 3,
H0619: 3, H0635: 3,
H0098: 3, H0575: 3,
S0003: 3, H0264: 3,
H0413: 3, H0623: 3,
H0494: 3, H0641: 3,
L0763: 3, L0667: 3,
L0794: 3, L0775: 3,

L0651: 3, L0806: 3,
L0653: 3, L0776: 3,
L0655: 3, H0519: 3,
H0690: 3, S0330: 3,
L0602: 3, S0404: 3,
L0779: 3, L0752: 3,
L0755: 3, H0542: 3,
S0114: 2, S0282: 2,
H0661: 2, S0356: 2,
S0376: 2, S0132: 2,
H0411: 2, H0431: 2,
H0586: 2, H0013: 2,
H0069: 2, S0280: 2,
L0021: 2, H0599: 2,
H0046: 2, H0014: 2,
H0051: 2, H0266: 2,
H0416: 2, H0687: 2,
H0316: 2, H0634: 2,
H0551: 2, T0042: 2,
S0440: 2, H0646: 2,
S0002: 2, H0529: 2,
L0769: 2, L0638: 2,
L0761: 2, L0372: 2,
L0646: 2, L0641: 2,
L0648: 2, L0804: 2,
L0784: 2, L0606: 2,
L0527: 2, L0663: 2,
S0374: 2, L0565: 2,
H0711: 2, S0380: 2,
H0696: 2, S3014: 2,

L0744: 2, L0740: 2,
L0746: 2, L0757: 2,
H0445: 2, L0591: 2,
H0543: 2, H0422: 2,
H0220: 1, H0222: 1,
H0685: 1, S0430: 1,
H0650: 1, L0808: 1,
S0116: 1, S0212: 1,
S0001: 1, H0662: 1,
H0459: 1, S0418: 1,
S0408: 1, H0393: 1,
L0717: 1, H0369: 1,
H0261: 1, H0392: 1,
H0409: 1, H0574: 1,
H0632: 1, L0623: 1,
H0250: 1, H0036: 1,
T0039: 1, T0109: 1,
S0474: 1, T0071: 1,
H0421: 1, S0049: 1,
H0052: 1, H0309: 1,
H0204: 1, H0597: 1,
H0544: 1, H0546: 1,
H0024: 1, H0200: 1,
H0071: 1, T0010: 1,
H0083: 1, H0355: 1,
S0318: 1, S0250: 1,
H0039: 1, L0483: 1,
H0031: 1, H0553: 1,
H0644: 1, H0182: 1,
H0032: 1, H0388: 1,

| HOCQD42 | HOCQD42R | 1423 | 1 - 315 | 3598 | Ala-1 to Gly-8, Leu-26 to Ser-40, Pro-57 to Leu-95 | H0040: 1, H0380: 1, H0280: 1, H0560: 1, H0561: 1, L0065: 1, H0652: 1, S0426: 1, L0369: 1, L0639: 1, L0637: 1, L0772: 1, L0642: 1, L0765: 1, L0378: 1, L0805: 1, L0607: 1, L0629: 1, L0384: 1, L0647: 1, L0789: 1, L0790: 1, S0052: 1, S0216: 1, H0144: 1, H0593: 1, S0126: 1, H0689: 1, H0682: 1, H0435: 1, H0659: 1, H0660: 1, H0648: 1, H0672: 1, H0518: 1, S0152: 1, S0406: 1, H0187: 1, H0576: 1, S0392: 1, H0478: 1, H0345: 1, S0027: 1, L0756: 1, S0031: 1, H0444: 1, H0707: 1, S0434: 1, L0599: 1, S0011: 1, H0668: 1, H0667: 1, S0196: 1 and L0697: 1. |

HOCQD45	HOCQD45R	1424	38 - 475	3599	Arg-11 to Arg-20, Glu-61 to Ser-66, Pro-114 to Ala-125.	S0126: 23, H0038: 16, S0372: 15, H0550: 12, H0031: 12, H0545: 10, L0659: 10, S0360: 9, L0662: 9, L0757: 9, L0758: 9, H0551: 8, S0322: 8, H0431: 7, L0666: 7, L0750: 7, H0486: 6, H0546: 6, S0440: 6, L0776: 6, H0549: 5, H0620: 5, L0664: 5, H0593: 5, H0672: 5, H0539: 5, S0380: 5, H0555: 5, L0747: 5, S0358: 4, S0007: 4, H0409: 4, S0010: 4, H0039: 4, H0622: 4, H0616: 4, L0769: 4, L0641: 4, L0655: 4, H0696: 4, L0731: 4, S0040: 3, S0212: 3, S0418: 3, S0045: 3, S0280: 3, H0012: 3, H0090: 3.
HOCQE35	HOCQE35R	1425	3 - 410	3600		
HOCQG94	HOCQG94R	1426	3 - 317	3601	Glu-58 to Arg-63.	
HOCQH81	HOCQH81R	1427	144 - 335	3602		
HOCQ131	HOCQ131R	1428	1 - 324	3603	Lys-21 to His-26, Arg-47 to Val-55, Ser-65 to Gly-70, Ala-76 to Gly-81.	

L0637: 3, L0771: 3,
L0775: 3, L0651: 3,
L0653: 3, H0690: 3,
H0660: 3, S0328: 3,
S0044: 3, H0295: 2,
T0049: 2, H0662: 2,
S0356: 2, S0354: 2,
S0376: 2, L0717: 2,
H0441: 2, H0333: 2,
H0574: 2, H0257: 2,
H0485: 2, H0575: 2,
H0251: 2, H0544: 2,
L0471: 2, H0014: 2,
S0051: 2, H0266: 2,
H0687: 2, S0003: 2,
H0328: 2, H0615: 2,
T0067: 2, H0412: 2,
H0059: 2, S0016: 2,
H0647: 2, S0210: 2,
L0598: 2, L0520: 2,
L0638: 2, L0796: 2,
L0772: 2, L0764: 2,
L0519: 2, L0790: 2,
H0519: 2, H0689: 2,
H0710: 2, S0406: 2,
S3014: 2, S0028: 2,
S0206: 2, L0740: 2,
S0031: 2, L0604: 2,
L0601: 2, S0192: 2,
S0342: 1, L0785: 1,

S0116: 1, S0298: 1,
H0663: 1, S0420: 1,
S0410: 1, S0468: 1,
H0369: 1, H0453: 1,
H0370: 1, H0392: 1,
H0602: 1, H0587: 1,
T0039: 1, H0013: 1,
H0004: 1, H0052: 1,
H0309: 1, H0046: 1,
H0041: 1, H0081: 1,
H0011: 1, H0049: 1,
T0079: 1, H0375: 1,
S0250: 1, S0214: 1,
H0252: 1, H0428: 1,
T0006: 1, H0032: 1,
H0708: 1, H0316: 1,
H0598: 1, H0400: 1,
H0100: 1, H0494: 1,
L0475: 1, S0014: 1,
S0015: 1, H0625: 1,
S0382: 1, H0646: 1,
L0762: 1, L0763: 1,
L0630: 1, L0646: 1,
L0768: 1, L0649: 1,
L0806: 1, L0656: 1,
L0809: 1, L0647: 1,
L0663: 1, L0665: 1,
S0374: 1, H0691: 1,
H0547: 1, H0682: 1,
H0521: 1, S0027: 1,

| HOCQJ35 | HOCQJ35R | 1429 | 61 - 546 | 3604 | Leu-16 to Pro-22, Val-30 to Asp-36. | L0748: 1, L0756: 1, L0777: 1, L0752: 1, L0755: 1, H0343: 1, H0707: 1, L0605: 1, H0668: 1, S0196: 1 and H0506: 1. | H0046: 12, L0771: 7, L0774: 3, L0651: 3, L0806: 3, L0666: 3, L0565: 3, L0748: 3, S0444: 2, S0408: 2, H0393: 2, L0372: 2, L0662: 2, L0766: 2, L0659: 2, L0664: 2, L0744: 2, L0731: 2, L0294: 1, S0442: 1, S0278: 1, H0549: 1, L0021: 1, H0085: 1, H0234: 1, H0596: 1, H0597: 1, H0546: 1, H0024: 1, S0003: 1, H0252: 1, H0383: 1, H0674: 1, H0068: 1, H0487: 1, H0413: 1, I0069: 1, H0100: 1, H0494: 1, H0625: 1, S0352: 1, L0761: 1, L0772: 1, L0646: 1, L0800: 1, L0764: 1, L0773: 1, L0794: 1. |

HOCQM24	HOCQM24R	1430	3 - 230	3605	Gly-2 to Gly-12, Gly-14 to Asn-28, Met-32 to Gly-49, Lys-54 to Phe-76.	L0649: 1, L0803: 1, L0805: 1, L0653: 1, L0515: 1, L0367: 1, L0665: 1, S0374: 1, H0684: 1, H0660: 1, S0328: 1, S0044: 1, S0404: 1, L0740: 1, L0747: 1, L0757: 1, L0758: 1, S0260: 1 and S0276: 1.
HODAF78	HODAF78R	1431	2 - 76	3606		
HODBT55	HODBT55R	1432	234 - 395	3607	Ala-1 to Ser-8.	H0328: 1 and H0455: 1.
HODCT68	HODCT68R	1433	266 - 484	3608	Gln-1 to Pro-16.	L0493: 4, L0794: 3, H0497: 2, H0038: 2, L0766: 2, L0809: 2, L0779: 2, L0777: 2, L0759: 2, L0601: 2, H0170: 1, S0114: 1, H0341: 1, H0125: 1, S0046: 1, H0592: 1, L0587: 1, H0559: 1, L0156: 1, H0328: 1, H0616: 1, H0386: 1, H0538: 1, H0529: 1, L0769: 1, L0764: 1,

	HODCZ252	HODCZ252R	1434	2 - 139	3609	
					AR089: 19, AR104: 18, AR060: 12, AR096: 7, AR055: 4, AR061: 3 L0751: 29, H0549: 17, H0550: 17, L0666: 9, L0747: 8, H0689: 7, H0690: 7, H0682: 7, H0615: 6, H0670: 6, H0328: 5, H0150: 4, H0660: 4, S0330: 4, S0044: 4, L0362: 4, H0597: 3, H0688: 3, L0764: 3, L0657: 3, L0809: 3, L0753: 3, L0758: 3, L0759: 3, H0431: 2, H0046: 2, T0067: 2, H0059: 2, H0647: 2, L0774: 2, L0805: 2, L0783: 2, L0438: 2, H0593: 2, H0648: 2, H0672: 2, S0328: 2, S0404: 2, L0744: 2, L0779: 2,	L0775: 1, L0666: 1, H0659: 1, H0518: 1, L0741: 1, L0439: 1, L0747: 1, L0593: 1, L0594: 1, H0665: 1 and H0667: 1.

HODDI57	HODDI57R	1435	3 - 194	3610	Gly-7 to Glu-41.	L0794: 4, L0803: 4, H0328: 3, L0779: 3, L0515: 2, L0809: 2, H0144: 2, L0754: 2, L0756: 2, L0759: 2, H0171: 1, S0282: 1, H0346: 1, S0222: 1, H0441: 1, H0486: 1, H0069: 1, H0052: 1, H0544: 1, H0266: 1, L0598: 1, L0638: 1, L0766: 1, L0650: 1,	S0436: 2, H0662: 1, S0442: 1, S0444: 1, S0408: 1, S0007: 1, H0461: 1, H0085: 1, H0009: 1, S0024: 1, H0188: 1, H0039: 1, H0604: 1, H0424: 1, H0169: 1, H0674: 1, L0520: 1, L5569: 1, L0803: 1, L0804: 1, L0775: 1, L0658: 1, L0634: 1, L0542: 1, L0528: 1, L2269: 1, L0663: 1, L0665: 1, H0684: 1, H0659: 1, H0658: 1, S0380: 1, S0406: 1, H0555: 1 and L0780: 1.

HODE147	HODE147R	1436	11 - 295	3611	Leu-7 to Thr-16.	L0774: 1, L0805: 1, L0776: 1, L0657: 1, L0559: 1, L0659: 1, L0543: 1, L0438: 1, H0682: 1, S0328: 1, L0745: 1, L0750: 1, L0777: 1, L0752: 1, L0758: 1, H0343: 1 and H0665: 1.	L0754: 20, L0759: 6, L0794: 4, H0615: 3, L0438: 3, S0126: 3, S0360: 2, H0411: 2, H0050: 2, H0163: 2, S0422: 2, L0665: 2, L0748: 2, L0747: 2, L0749: 2, L0780: 2, L0755: 2, H0595: 2, L0361: 2, H0170: 1, H0686: 1, H0638: 1, S0418: 1, S0358: 1, S0376: 1, H0586: 1, H0587: 1, H0009: 1, H0024: 1, H0328: 1, H0428: 1, H0625: 1, S0210: 1, L0598: 1, L0667: 1, L0764: 1, L0662: 1, L0766: 1, L0649: 1, L0650: 1, L0805: 1, L0655: 1,

Clone	Clone R	SEQ	aa range	SEQ NO	Mutations	cDNA clones
HODEO42	HODEO42R	1437	1 – 54	3612		L0789: 1, L0663: 1, H0144: 1, S0330: 1, S0028: 1, L0751: 1, L0750: 1, L0731: 1, L0758: 1 and L0605: 1.
HODEP78	HODEP78R	1438	187 – 432	3613		L0803: 7, L0439: 4, L0663: 3, L0749: 3, H0615: 2, L0769: 2, L0794: 2, L0774: 2, L0748: 2, L0777: 2, L0752: 2, L0142: 1, H0646: 1, L0767: 1, L0804: 1, L0784: 1, L0805: 1, L0789: 1, L0666: 1, L0438: 1, H0670: 1 and L0589: 1.
HODEQ42	HODEQ42R	1439	349 – 444	3614	Asn-1 to Ser-6, Thr-22 to Asn-32.	H0615: 1 and S0031: 1.
HODER57	HODER57R	1440	92 – 289	3615		
HODES60	HODES60R	1441	2 – 421	3616		L0662: 1, H0615: 1, L0761: 1, L0791: 1, H0519: 1, L0752: 1 and L0758: 1.
HODEU47	HODEU47R	1442	153 – 347	3617	Ser-1 to Ser-9, Asp-15 to Ala-21.	H0615: 2
HODEV69	HODEV69R	1443	370 – 546	3618		
HODEW54	HODEW54R	1444	374 – 568	3619		H0328: 1 and H0615: 1.

HODEW79	HODEW79R	1445	309 - 566	3620		H0615: 2 and L0532: 1.
HODEX45	HODEX45R	1446	220 - 423	3621		H0615: 4 and L0659: 1.
HODEX69	HODEX69R	1447	58 - 231	3622		
HODEX79	HODEX79R	1448	1 - 432	3623		
HODFC44	HODFC44RP00	1449	1 - 207	3624	Ala-9 to Asp-21, Thr-31 to Arg-37.	L0747: 16, L0754: 10, L0751: 7, L0757: 7, H0657: 6, L0748: 6, L0771: 5, H0659: 5, L0740: 5, L0755: 5, H0594: 4, L0744: 4, H0341: 3, S0358: 3, S0278: 3, H0333: 3, H0615: 3, S0366: 3, L0520: 3, L0775: 3, L0517: 3, S0374: 3, S0328: 3, L0731: 3, H0136: 3, T0002: 2, S0218: 2, S0116: 2, S0354: 2, S0376: 2, H0637: 2, S0045: 2, H0370: 2, L0622: 2, H0156: 2, H0599: 2, H0545: 2, H0266: 2, H0039: 2, H0617: 2, H0132: 2, L0769: 2, L0665: 2, H0672: 2, H0539: 2, H0134: 2, L0756: 2, L0752: 2,

L0758: 2, H0624: 1,
H0170: 1, H0265: 1,
S6024: 1, H0656: 1,
H0255: 1, H0661: 1,
H0125: 1, H0192: 1,
S0418: 1, S0420: 1,
S0360: 1, H0580: 1,
H0393: 1, S0300: 1,
H0411: 1, H0369: 1,
H0261: 1, S0222: 1,
L0623: 1, S0280: 1,
H0618: 1, H0318: 1,
H0581: 1, H0421: 1,
L0738: 1, H0086: 1,
L0471: 1, H0024: 1,
H0082: 1, L0043: 1,
S0214: 1, H0031: 1,
H0673: 1, H0068: 1,
H0038: 1, H0634: 1,
H0087: 1, T0067: 1,
H0412: 1, H0100: 1,
H0512: 1, S0144: 1,
S0142: 1, S0344: 1,
S0422: 1, H0517: 1,
L0762: 1, L0763: 1,
L0761: 1, L0764: 1,
L0768: 1, L0766: 1,
L0649: 1, L0774: 1,
L0651: 1, L0776: 1,
L0655: 1, L0526: 1,

HODFD90	HODFD90R	1450	3 - 281	3625	Ser-22 to Gln-38.	L0518: 1, L0783: 1, L0809: 1, L0666: 1, L0663: 1, H0144: 1, H0593: 1, H0682: 1, H0648: 1, S0044: 1, H0214: 1, L0439: 1, L0749: 1, L0750: 1, L0753: 1, H0444: 1, H0445: 1, H0595: 1, L0581: 1, L0593: 1 and H0542: 1.	L0794: 3, L0776: 2, S0358: 1, H0615: 1, H0538: 1, L0662: 1, L0803: 1, L0805: 1, L0791: 1, L0663: 1, S0374: 1, H0658: 1 and L0758: 1.
HODFE81	HODFE81R	1451	296 - 433	3626			L0766: 2, H0328: 1 and H0615: 1.
HODFI68	HODFI68R	1452	293 - 409	3627			
HODFI14	HODFI14R	1453	2 - 259	3628	Phe-45 to Tyr-60, Arg-67 to Glu-74.		H0328: 1 and H0615: 1.
HODFJ52	HODFJ52R	1454	97 - 225	3629	Pro-18 to Pro-23, Pro-37 to Val-42.		
HODFK30	HODFK30RA	1455	1 - 69	3630			
HODFK89	HODFK89R	1456	16 - 324	3631	Lys-69 to Asp-81.		
HODFL50	HODFL50R	1457	1 - 165	3632			H0615: 2, H0370: 1, H0328: 1 and L0749: 1.

HODFL75	HODFL75R	1458	304 - 393	3633	Ala-2 to Trp-9.	H0615: 2
HODFO16	HODFO16R	1459	251 - 565	3634		
HODFO64	HODFO64R	1460	1 - 195	3635	Glu-12 to Gly-27, Gln-37 to Tyr-49.	L0666: 3, H0615: 2, S0116: 1, H0675: 1, H0012: 1, L0055: 1, S0438: 1, L0763: 1, L0667: 1, L0649: 1, L0803: 1, L0804: 1, L0659: 1, H0689: 1, H0659: 1, L0752: 1 and S0026: 1.
HODFP51	HODFP51R	1461	11 - 439	3636	His-33 to Leu-39, Gly-49 to Glu-56, Ser-60 to Lys-143.	
HODFQ19	HODFQ19R	1462	1 - 519	3637	Leu-33 to Val-40, Lys-144 to Glu-152.	
HODFQ37	HODFQ37R	1463	2 - 535	3638	His-1 to Lys-12, Gln-17 to Leu-27, Val-69 to Asp-76, Asp-122 to Trp-128, Asp-141 to Glu-146, Ser-155 to His-164.	
HODFR72	HODFR72R	1464	84 - 512	3639		H0615: 2
HODFU24	HODFU24R	1465	372 - 695	3640		
HODFU78	HODFU78R	1466	2 - 130	3641		
HODFV22	HODFV22R	1467	291 - 467	3642	Pro-1 to Asp-7.	
HODFV60	HODFV60R	1468	7 - 168	3643		H0328: 1, H0615: 1 and L0365: 1.
HODFV69	HODFV69R	1469	64 - 210	3644		H0615: 3, H0693: 2,

HODFV79	HODFV79R	1470	360 - 623	3645	H0266: 1, S0002: 1, L0790: 1, H0547: 1, S0152: 1, H0521: 1, H0696: 1, L0366: 1, S0194: 1 and S0276: 1.
HODFV82	HODFV82R	1471	14 - 154	3646	
HODFV95	HODFV95R	1472	587 - 718	3647	
HODFY38	HODFY38R	1473	22 - 309	3648	Lys-8 to Tyr-26, Thr-67 to Met-73.	H0615: 2, S0444: 1, L0438: 1 and L0439: 1.
HODGA29	HODGA29R	1474	186 - 308	3649	Val-1 to Ser-9, Gln-22 to Ser-29.
HODGB69	HODGB69R	1475	3 - 95	3650	
HODGB78	HODGB78R	1476	91 - 225	3651	Thr-14 to Asn-19.
HODGE22	HODGE22R	1477	129 - 407	3652	
HODGH30	HODGH30R	1478	25 - 132	3653	Thr-7 to Ser-14, Pro-28 to Gly-36.
HODGH43	HODGH43R	1479	36 - 128	3654	His-8 to Gly-18, Phe-25 to Gly-30.
HODGH65	HODGH65R	1480	2 - 166	3655	H0615: 2
HODGL65	HODGL65R	1481	127 - 300	3656	L0754: 2, L0756: 2, H0615: 1, L0438: 1 and L0747: 1.
HODGN53	HODGN53R	1482	2 - 583	3657	Lys-1 to Thr-7, Ser-13 to Arg-33, Val-56 to Lys-63, Phe-143 to Thr-148.	L0741: 4, H0615: 2, L0769: 2, L0793: 2, H0328: 1, S0144: 1, L0794: 1, L0499: 1, L0805: 1, L0438: 1 and L0755: 1.

HODG002	HODG002R	1483	361 - 561	3658		
HODG009	HODG009R	1484	1 - 348	3659		H0615: 2 and L0779: 1.
HODG021	HODG021R	1485	2 - 193	3660	Glu-23 to Val-28, Arg-56 to Ser-64.	
HODGP53	HODGP53R	1486	1 - 198	3661		
HODGQ52	HODGQ52R	1487	9 - 131	3662		
HODGS83	HODGS83R	1488	205 - 354	3663		
HODGW91	HODGW91R	1489	182 - 3	3664	Lys-1 to Gly-12, Pro-25 to Thr-37, Ser-46 to Gly-51.	
HODGX46	HODGX46R	1490	358 - 513	3665		H0615: 3 and L0766: 1.
HODGX91	HODGX91R	1491	219 - 572	3666		
HODGY90	HODGY90R	1492	379 - 573	3667		
HODG263	HODG263R	1493	1 - 504	3668	Pro-30 to Asn-35, Arg-39 to Asn-57, Ser-62 to Ile-67, Glu-73 to Arg-81, Lys-89 to Lys-99.	L0805: 19, L0794: 13, L0766: 12, L0740: 11, L0747: 11, L0779: 11, L0803: 8, H0521: 7, L0439: 7, L0731: 7, L0605: 7, S0474: 6, S0422: 6, L0769: 6, L0776: 5, L0665: 5, L0748: 5, L0758: 5, H0618: 4, S0010: 4, L0771: 4, L0789: 4, S3014: 4, H0341: 3, H0615: 3, L0659: 3, S0052: 3, L0438: 3.

H0658: 3, H0436: 3,
L0752: 3, L0759: 3,
S0360: 2, S0222: 2,
H0574: 2, H0599: 2,
H0196: 2, H0050: 2,
H0266: 2, H0708: 2,
H0135: 2, H0038: 2,
H0616: 2, L0804: 2,
H0144: 2, S0374: 2,
L0352: 2, H0682: 2,
L0743: 2, L0744: 2,
L0751: 2, L0749: 2,
L0756: 2, S0424: 2,
H0624: 1, T0002: 1,
H0657: 1, L0785: 1,
H0671: 1, S0442: 1,
S0408: 1, H0733: 1,
S0278: 1, H0431: 1,
H0013: 1, S0280: 1,
H0581: 1, S0049: 1,
H0052: 1, H0251: 1,
L0040: 1, H0123: 1,
L0471: 1, H0630: 1,
H0375: 1, S0003: 1,
H0252: 1, L0483: 1,
T0006: 1, H0644: 1,
H0673: 1, S0036: 1,
H0163: 1, H0040: 1,
H0551: 1, H0412: 1,
H0413: 1, S0038: 1,

HODGZ76	HODGZ76R	1494	12 - 179	3669		H0509: 1, H0131: 1, S0344: 1, L0598: 1, L0369: 1, L0763: 1, L0770: 1, L0638: 1, L0667: 1, L0662: 1, L0363: 1, L0768: 1, L0775: 1, L0375: 1, L0806: 1, L0653: 1, L0655: 1, L0809: 1, S0126: 1, H0689: 1, H0684: 1, H0660: 1, H0672: 1, H0710: 1, H0522: 1, S0146: 1, S3012: 1, S0027: 1, S0028: 1, L0745: 1, L0750: 1, L0780: 1, L0753: 1, H0445: 1, L0362: 1, L0361: 1, H0653: 1, H0423: 1 and H0506: 1.
HODIID23	HODHD23R	1495	3 - 134	3670	Pro-8 to Asn-18, Gln-25 to Glu-30.	
HODHD64	HODHD64R	1496	14 - 205	3671	Tyr-33 to Tyr-38.	H0615: 2
HODHE36	HODHE36R	1497	190 - 366	3672		H0328: 1 and H0615: 1.
HODHE54	HODHE54R	1498	3 - 515	3673	Glu-7 to Tyr-12, Glu-44 to Asp-49, Pro-57 to Gly-64, Leu-69 to Arg-74,	

HODHE88	HODHE88R	1499	2 - 166	3674	Thr-76 to Tyr-86. Lys-42 to Asp-48.	H0328: 1 and H0615: 1.
HODHG56	HODHG56R	1500	82 - 300	3675	Glu-11 to Trp-17, Val-22 to Ser-29, Asp-45 to Lys-52.	
HODHJ56	HODHJ56R	1501	281 - 499	3676	Trp-12 to Ile-18, Gln-40 to Leu-54.	
HODHK82	HODHK82R	1502	71 - 238	3677	Lys-17 to Ala-24.	
HODHK86	HODHK86R	1503	2 - 292	3678	Glu-1 to Gln-7, Met-64 to Gly-69.	
HODIG29	HODIG29R	1504	2 - 115	3679		
HODIL36	HODIL36RA	1505	218 - 472	3680	Lys-9 to Ser-15, Val-42 to Thr-50.	H0261: 1 and H0615: 1.
HODIZ09	HODIZ09R	1506	31 - 594	3681	Phe-116 to Met-126.	AR104: 14, AR096: 13, AR089: 11, AR060: 10, AR055: 6, AR061: 5 H0615: 3, H0658: 2, H0661: 1 and L0355: 1.
HODKB19	HODKB19R	1507	504 - 746	3682		
HODKB82	HODKB82R	1508	3 - 344	3683	Gln-40 to Glu-48, Phe-68 to Arg-77, Ile-108 to Glu-113.	
HODKB89	HODKB89R	1509	73 - 216	3684		
HODKB93	HODKB93R	1510	1 - 159	3685	Arg-33 to Thr-38.	
HODKC29	HODKC29R	1511	1 - 486	3686		S0360: 9, L0642: 5, L0752: 5, L0662: 4, L0659: 4, L0666: 4.

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L0775: 2, L0665: 2,
H0648: 2, L0779: 2,
S0031: 2, S0110: 1,
H0638: 1, S0418: 1,
S0376: 1, S0408: 1,
L0717: 1, H0331: 1,
H0574: 1, S0414: 1,
H0492: 1, H0156: 1,
L0021: 1, S0049: 1,
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H0373: 1, T0010: 1,
S6028: 1, H0615: 1,
S0366: 1, S0036: 1,
H0038: 1, H0616: 1,
H0413: 1, T0041: 1,
H0494: 1, S0438: 1,
S0440: 1, H0509: 1,
S0142: 1, S0210: 1,
L0598: 1, L0762: 1,
L0640: 1, L0631: 1,
L0772: 1, L0766: 1,
L0551: 1, L0774: 1,
L0664: 1, H0547: 1,
S0126: 1, H0659: 1,
S0378: 1, S0152: 1,

HODKC67	HODKC67R	1512	242 - 373	3687		H0696: 1, S3014: 1, L0439: 1, L0740: 1, L0754: 1, L0756: 1, L0780: 1, L0755: 1, L0758: 1, S0434: 1 and H0667: 1.
HODKD20	HODKD20R	1513	43 - 213	3688	Arg-11 to Ser-17, Leu-51 to Pro-57.	H0615: 2
HODKD64	HODKD64R	1514	413 - 237	3689	Pro-5 to Asn-10.	H0615: 2 and H0696: 1.
HODKE85	HODKE85R	1515	314 - 412	3690	Ser-18 to Ile-23.	H0615: 2 and H0328: 1.
HODKF91	HODKF91R	1516	244 - 417	3691	Lys-12 to Ser-18.	
HODKG09	HODKG09R	1517	28 - 240	3692		
HODKJ77	HODKJ77R	1518	452 - 595	3693		
HODKK26	HODKK26R	1519	2 - 415	3694	Asp-40 to Gly-45, Leu-59 to Glu-67, Lys-95 to Ile-105, Asp-113 to Gly-118.	H0615: 2
HODKK40	HODKK40R	1520	1 - 642	3695	Ser-15 to Phe-23, Lys-41 to Tyr-46, Pro-48 to Val-59, Thr-90 to Ile-103, Ser-110 to Arg-116, Pro-123 to Lys-137, Lys-157 to Glu-167, Arg-178 to Arg-194.	
HODKK73	HODKK73R	1521	3 - 344	3696	Phe-106 to Pro-114.	

					H0615: 2
HODKK77	HODKK77R	1522	272 - 433	3697	
HODKL56	HODKL56R	1523	439 - 579	3698	
HODKM25	HODKM25R	1524	36 - 149	3699	
HODKM31	HODKM31R	1525	1 - 210	3700	
HODKN65	HODKN65R	1526	2 - 409	3701	
HOECR39	HOECR39R	1527	20 - 328	3702	Ser-8 to Asn-15.	H0659: 4, L0770: 3, L0747: 3, H0663: 2, S0360: 2, L0521: 2, L0776: 2, S0126: 2, H0658: 2, S0406: 2, L0755: 2, L0758: 2, L0759: 2, S0242: 2, T0002: 1, H0686: 1, H0341: 1, L0616: 1, S0354: 1, S0408: 1, H0052: 1, H0009: 1, H0083: 1, H0266: 1, H0615: 1, L0483: 1, H0040: 1, H0561: 1, S0422: 1, L0520: 1, L0625: 1, L0662: 1, L0766: 1, L0649: 1, L0519: 1, H0648: 1, S3014: 1, L0748: 1 and L0779: 1.
HOFAB77	HOFAB77R	1528	1 - 399	3703	Glu-10 to Ala-26, Lys-31 to Tyr-43, Lys-45 to Glu-50, Ile-96 to Lys-102, Asp-123 to Gly-128.	

HOFMF37	HOFMF37R	1529	95 - 277	3704		
HOFMF79	HOFMF79RA	1530	85 - 219	3705		
HOFMJ88	HOFMJ88R	1531	2 - 397	3706		Arg-1 to Phe-16.
HOFMJ93	HOFMJ93R	1532	1 - 162	3707		His-3 to Ala-19.
HOFMM84	HOFMM84R	1533	1 - 204	3708		
HOFMN93	HOFMN93R	1534	69 - 323	3709	H0415: 2	Glu-8 to Thr-14.
HOFMP59	HOFMP59R	1535	1 - 423	3710		Ala-5 to Arg-14.
HOFMT68	HOFMT68R	1536	50 - 289	3711		Asn-41 to Lys-56.
HOFMT69	HOFMT69R	1537	1 - 264	3712		
HOFMU92	HOFMU92R	1538	1 - 369	3713		
HOFMV06	HOFMV06R	1539	3 - 296	3714		Asp-1 to Leu-10.
HOFNF63	HOFNF63R	1540	2 - 481	3715	H0415: 2	Arg-1 to Arg-8, Ala-22 to Met-31, Asp-51 to Gln-56.
HOFNF76	HOFNF76R	1541	2 - 421	3716		Arg-1 to Ala-6, Ser-68 to Arg-73, Arg-87 to Ala-93.
HOFNG51	HOFNG51R	1542	25 - 387	3717		Arg-1 to Cys-10, Glu-75 to Arg-94, Arg-99 to Gly-115.
HOFNK44	HOFNK44R	1543	1 - 186	3718		Lys-52 to Asp-57.
HOFNY53	HOFNY53R	1544	2 - 232	3719		Arg-1 to Phe-7, Gly-24 to Arg-36.
HOFOB65	HOFOB65R	1545	1 - 453	3720		
HOFOB79	HOFOB79RP00A	1546	2 - 682	3721		Val-31 to Val-38, Phe-46 to Ile-59, Arg-120 to Gln-126.
HOFOE22	HOFOE22R	1547	1 - 345	3722		
HOFOF47	HOFOF47R	1548	3 - 326	3723		Asn-49 to Leu-54.

HOFOF56	HOFOF56R	1549	1 - 351	3724	Ala-4 to Arg-11.	
HOGAC46	HOGAC46R	1550	35 - 193	3725	Ala-1 to Tyr-6, Ile-17 to Ser-32.	
HOGAQ03	HOGAQ03R	1551	110 - 286	3726	Pro-34 to Lys-39.	H0436: 44, L0748: 14, L0439: 9, L0747: 9, L0769: 7, L0803: 7, L0740: 7, L0755: 7, L0758: 7, L0761: 6, L0662: 6, L0794: 6, L0766: 6, L0663: 6, L0779: 6, H0542: 6, L0717: 5, L0756: 5, H0052: 4, H0135: 4, L0774: 4, L0659: 4, L0665: 4, L0777: 4, L0780: 4, L0731: 4, L0759: 4, H0556: 3, S0420: 3, S0410: 3, S0422: 3, L0763: 3, L0649: 3, L0804: 3, L0805: 3, L0776: 3, L0438: 3, H0547: 3, H0672: 3, H0539: 3, L0754: 3, L0757: 3, L0591: 3, H0422: 3, S0040: 2, S0114: 2, S0116: 2, H0255: 2, H0619: 2, H0486: 2, T0039: 2, H0013: 2, H0635: 2, H0253: 2.

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H0688: 2, H0428: 2,
H0628: 2, L0055: 2,
H0040: 2, H0087: 2,
H0488: 2, H0100: 2,
T0042: 2, H0529: 2,
L5566: 2, L0667: 2,
L0771: 2, L0768: 2,
L0375: 2, L0517: 2,
L0809: 2, L0666: 2,
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H0593: 2, S0380: 2,
H0694: 2, L0742: 2,
L0751: 2, L0750: 2,
S0434: 2, S0436: 2,
L0361: 2, L0601: 2,
L0603: 2, S0424: 2,
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H0650: 1, H0657: 1,
H0656: 1, L0760: 1,
H0341: 1, S0001: 1,
H0663: 1, H0662: 1,
S0418: 1, S0356: 1,
S0408: 1, H0580: 1,
S0007: 1, H0229: 1,
S0045: 1, S0046: 1,
S0132: 1, H0351: 1,
H0411: 1, H0431: 1,
H0592: 1, H0497: 1,

H0069: 1, S0280: 1,
H0118: 1, H0618: 1,
S0010: 1, H0421: 1,
H0251: 1, H0204: 1,
H0572: 1, H0050: 1,
H0012: 1, H0373: 1,
H0051: 1, T0010: 1,
H0354: 1, H0252: 1,
H0328: 1, H0622: 1,
H0181: 1, H0617: 1,
H0673: 1, H0038: 1,
H0634: 1, H0616: 1,
H0155: 1, H0264: 1,
S0038: 1, H0022: 1,
H0625: 1, H0538: 1,
S0210: 1, S0002: 1,
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L5565: 1, L0373: 1,
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L0655: 1, L0657: 1,
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S0126: 1, H0689: 1,
H0690: 1, H0682: 1,
H0435: 1, H0670: 1,
H0648: 1, S0330: 1,

| HOGBE60 | HOGBE60R | 1552 | 265 - 591 | 3727 | Asp-15 to His-22. | S0378: 1, S0152: 1, S0406: 1, H0555: 1, H0678: 1, L0744: 1, L0752: 1, L0753: 1, H0445: 1, H0707: 1, L0593: 1, L0595: 1, S0011: 1, H0668: 1, S0026: 1, H0665: 1, S0196: 1, H0543: 1 and H0677: 1. | L0777: 7, L0747: 6, L0779: 6, L0748: 5, L0776: 4, L0749: 4, L0770: 3, L0766: 3, L0759: 3, S0442: 2, L0769: 2, L0761: 2, L0771: 2, L0774: 2, L0527: 2, L0783: 2, L0665: 2, L0757: 2, L0758: 2, S0412: 2, H0402: 1, S0444: 1, H0438: 1, H0587: 1, H0333: 1, L0471: 1, H0674: 1, H0646: 1, L0763: 1, L0643: 1, L0764: 1, L0662: 1, L0363: 1, L0767: 1, L0387: 1, L0803: 1, L0526: 1, L0647: 1, L0663: 1, H0690: 1, |

HOGCF48	HOGCF48R	1553	230 - 436	3728	H0435: 1, S0330: 1, S0406: 1, L0740: 1, L0751: 1, L0780: 1, S0436: 1 and L0596: 1.
HOGCG83	HOGCG83R	1554	50 - 409	3729	
HOGCH23	HOGCH23R	1555	58 - 207	3730	
HOGCI28	HOGCI28R	1556	3 - 332	3731	H0435: 4, H0726: 3, L0748: 3, H0355: 2, H0059: 2, L0525: 2, H0713: 1, H0717: 1, H0586: 1, H0427: 1, H0575: 1, H0744: 1, H0327: 1, H0271: 1, H0622: 1, H0087: 1, S0438: 1, L0792: 1, H0593: 1, H0555: 1, L0698: 1 and H0506: 1.
HOGCI10	HOGCI10R	1557	10 - 480	3732	H0052: 1, H0135: 1, H0429: 1, H0519: 1 and H0435: 1.
HOGCI42	HOGCI42R	1558	3 - 254	3733	Val-6 to Ala-11.
HOGCI55	HOGCI55R	1559	7 - 507	3734	Thr-56 to Glu-61, Lys-87 to Lys-95, Thr-110 to Arg-118.
HOGCP07	HOGCP07R	1560	3 - 143	3735	
HOGCP86	HOGCP86RA	1561	1 - 486	3736	Arg-11 to Arg-16, Pro-46 to Thr-52, His-58 to Pro-65,

HOGCT44	HOGCT44R	1562	1 - 183	3737	His-14 to Phe-20, Ser-37 to Gly-60.	Ala-71 to Trp-77, Pro-134 to Gly-146.
HOGCV85	HOGCV85R	1563	3 - 443	3738	Gly-20 to Leu-28, Val-33 to Gly-41, Thr-43 to Gly-55, Val-58 to Arg-66.	
HOGCV93	HOGCV93R	1564	22 - 513	3739	Lys-7 to Thr-13, Asp-24 to Thr-30, Gly-39 to Glu-52, Leu-70 to Arg-76, Phe-87 to Tyr-92.	
HOGCY12	HOGCY12R	1565	2 - 235	3740	Lys-2 to Thr-8, Asp-19 to Thr-25, Gly-34 to Glu-47, Leu-65 to Arg-71.	
HOGCY58	HOGCY58R	1566	3 - 338	3741	Asn-5 to Gln-12, Gln-19 to Glu-25, Arg-78 to Glu-99, Thr-106 to Ala-111.	
HOGCY74	HOGCY74R	1567	3 - 260	3742	Arg-1 to Asn-8, Phe-18 to His-24, Asp-57 to Lys-62, Lys-76 to Asp-81.	
HOGDD29	HOGDD29R	1568	3 - 152	3743		
HOGDE77	HOGDE77R	1569	95 - 184	3744		
HOGDG03	HOGDG03R	1570	2 - 397	3745	Thr-9 to His-19, Leu-35 to Ala-46,	

HOGDG76	HOGDG76R	1571	3 - 497	3746	Pro-55 to Pro-60, Gly-69 to Arg-74. Arg-35 to Gly-40, His-51 to Lys-56, Phe-94 to Ser-99, Thr-102 to Gly-107, Pro-113 to Ser-120.	L0665: 3, H0682: 2, H0435: 2, L0751: 2, H0663: 1, L0021: 1, H0647: 1, L0806: 1, L0664: 1, H0683: 1, H0670: 1 and H0660: 1.
HOGDI44	HOGDI44R	1572	1 - 342	3747	Gln-58 to Gln-64, Cys-73 to Arg-88.	
HOGDI49	HOGDI49R	1573	124 - 357	3748		
HOGDO25	HOGDO25R	1574	2 - 322	3749	Pro-38 to Met-44.	
HOGDO58	HOGDO58R	1575	74 - 244	3750	Pro-6 to Tyr-17, Val-39 to Gln-45.	
HOGDP10	HOGDP10R	1576	3 - 299	3751	Glu-3 to Glu-14.	
HOGDQ54	HOGDQ54R	1577	3 - 335	3752		
HOGDQ95	HOGDQ95R	1578	22 - 492	3753	Arg-9 to Val-17.	
HOGDR70	HOGDR70R	1579	48 - 470	3754	Arg-9 to Arg-18, Arg-27 to Arg-35, Arg-47 to Asp-55, Asp-78 to Lys-83.	
HOGDV93	HOGDV93R	1580	1 - 417	3755	Gly-1 to Ala-6, Glu-54 to Ile-62, Asp-89 to Thr-98.	
HOGEA27	HOGEA27R	1581	2 - 241	3756		
HOGED85	HOGED85R	1582	3 - 326	3757	Tyr-94 to Phe-99.	
HOGEK25	HOGEK25R	1583	2 - 325	3758		
HOGEN30	HOGEN30R	1584	2 - 325	3759	Leu-3 to Arg-19.	
HOGEN55	HOGEN55R	1585	2 - 226	3760		

HOGEB46	HOGEP46R	1586	3 - 212	3761	Gly-17 to Asn-27, Ser-51 to His-61.	L0521: 1, L0662: 1 and H0435: 1.
HOGEP69	HOGEP69R	1587	2 - 223	3762		H0295: 8, H0617: 7, L0665: 7, H0435: 7, H0592: 6, H0494: 6, L0439: 6, L0751: 6, L0360: 5, S0046: 4, H0587: 4, H0012: 4, H0264: 4, L0662: 4, S0406: 4, H0586: 3, H0620: 3, H0031: 3, H0551: 3, S0440: 3, S0002: 3, L0763: 3, L0648: 3, L0649: 3, L0774: 3, L0659: 3, H0520: 3, H0547: 3, H0689: 3, H0660: 3, S0328: 3, S0330: 3, L0748: 3, L0754: 3, L0750: 3, H0294: 2, H0650: 2, H0341: 2, S0356: 2, S0132: 2, H0370: 2, H0333: 2, H0643: 2, L0623: 2, H0706: 2, H0081: 2, H0039: 2, H0553: 2, H0181: 2, H0068: 2, H0135: 2, H0040: 2, H0646: 2, L0640: 2
HOGET60	HOGET60R	1588	2 - 376	3763		

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L0806: 2, L0776: 2,
L0657: 2, L0809: 2,
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L0740: 2, S0434: 2,
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S0376: 1, S0410: 1,
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H0455: 1, H0600: 1,
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H0052: 1, H0234: 1,
H0597: 1, H0121: 1,
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H0292: 1, H0428: 1,
H0622: 1, T0023: 1,
H0059: 1, H0316: 1,
H0030: 1, H0100: 1,
S0306: 1, T0090: 1,
H0649: 1, S0210: 1,
S0426: 1, L0646: 1,
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L0626: 1, L0768: 1,
L0364: 1, L0766: 1,

					Pro-8 to Asn-34, Ala-39 to Arg-53.	L0375: 1, L0651: 1, L0378: 1, L0633: 1, L0655: 1, L0558: 1, L0635: 1, L0518: 1, L0383: 1, L0792: 1, L0663: 1, S0006: 1, H0696: 1, S0044: 1, S3014: 1, L0743: 1, L0752: 1, L0755: 1, L0731: 1, L0759: 1, H0216: 1, H0543: 1, S0424: 1 and H0506: 1.	AR096: 1, AR104: 1, AR055: 0, AR061: 0, AR060: 0, AR089: 0 S0250: 1 and H0435: 1.
HOGEU084	HOGEU84R	1589	3 - 368	3764			
HOGEW58	HOGEW58R	1590	1 - 417	3765			
HOGEW72	HOGEW72R	1591	256 - 333	3766			
HOGEZ03	HOGEZ03R	1592	52 - 144	3767			
HOGE227	HOGE227R	1593	2 - 307	3768			
HOHDI15	HOHDI15R	1594	3 - 170	3769			
HOOHB44	HOOHB44R	1595	128 - 313	3770	Ser-1 to Gln-6, Ser-51 to Thr-56.		
HOOHC27	HOOHC27R	1596	9 - 194	3771	Gly-4 to Lys-10.		
HOOHJ69	HOOHJ69R	1597	9 - 152	3772	Gly-4 to Lys-10.		
HOOHK47	HOOHK47R	1598	126 - 260	3773			H0637: 2, H0413: 1 and H0648: 1.
HOOHL15	HOOHL15R	1599	60 - 383	3774			
HOOHL19	HOOHL19R	1600	14 - 205	3775	Pro-17 to Ser-24.		

HOOHL68	HOOHL68R	1601	271 - 570	3776	
					L0748: 11, L0666: 5, L0750: 5, L0805: 4, L0663: 4, L0664: 4, L0439: 4, L0662: 3, L0758: 3, L0005: 2, H0587: 2, H0318: 2, H0052: 2, H0024: 2, H0553: 2, L0770: 2, L0648: 2, L0766: 2, L0497: 2, L0665: 2, H0519: 2, H0648: 2, L0740: 2, L0731: 2, L0593: 2, H0677: 2, H0170: 1, H0583: 1, H0638: 1, H0586: 1, H0331: 1, H0486: 1, H0013: 1, H0156: 1, H0036: 1, L0040: 1, H0620: 1, S6028: 1, H0328: 1, H0615: 1, T0023: 1, S0036: 1, H0591: 1, H0040: 1, T0067: 1, S0472: 1, H0529: 1, L0761: 1, L0764: 1, L0771: 1, L0649: 1, L0803: 1, L0804: 1, L0775: 1, L0806: 1, L0655: 1, L0657: 1, L0659: 1, L0790: 1, H0144: 1,

HOOHP84	HOOHP84R	1602	1 - 186	3777		L0438: 1, H0672: 1, H0522: 1, S0392: 1, L0747: 1, L0749: 1, L0756: 1, L0752: 1, H0445: 1, L0591: 1 and H0422: 1.
HOOHQ09	HOOHQ09R	1603	161 - 313	3778	Lys-1 to Lys-13.	
HOOHQ83	HOOHQ83R	1604	67 - 399	3779	Pro-10 to Ser-37, Gln-41 to Thr-57, Arg-62 to Thr-68, Pro-80 to Lys-85, Gly-99 to Gly-106.	
HOOHR81	HOOHR81R	1605	336 - 500	3780		
HOOHS67	HOOHS67R	1606	69 - 281	3781		
HOOHS82	HOOHS82R	1607	53 - 145	3782		
HOOHT13	HOOHT13R	1608	3 - 194	3783	Glu-1 to Glu-11.	
HOOHX50	HOOHX50R	1609	17 - 163	3784		
HOOIA46	HOOIA46R	1610	3 - 239	3785		L0770: 12, H0657: 10, H0659: 9, L0776: 8, H0648: 8, L0755: 8, L0774: 7, S0410: 6, H0494: 6, L0769: 6, L0750: 6, S0408: 5, L0775: 5, S0440: 5, L0775: 5, S0376: 4, S0360: 4, L0748: 4, L0777: 4, L0752: 4, L0759: 4, H0341: 3, S0358: 3,

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H0656: 2, S0420: 2,
S0444: 2, T0109: 2,
H0156: 2, H0545: 2,
L0471: 2, H0031: 2,
H0040: 2, H0560: 2,
L0065: 2, S0438: 2,
L0763: 2, L0772: 2,
L0764: 2, L0518: 2,
L0783: 2, H0144: 2,
S0374: 2, H0520: 2,
H0658: 2, H0670: 2,
L0753: 2, H0445: 2,
S0434: 2, H0665: 2,
S0194: 2, S0134: 1,
S0116: 1, H0663: 1,
L0481: 1, H0638: 1,
H0125: 1, S0442: 1,
H0351: 1, H0369: 1,
H0550: 1, H0431: 1,
H0331: 1, H0069: 1,
S0346: 1, T0048: 1,
S0182: 1, S0049: 1,
H0563: 1, H0081: 1,
H0620: 1, H0014: 1,
H0373: 1, H0083: 1,

H0375: 1, H0428: 1, H0708: 1, H06334: 1, H0412: 1, H0413: 1, L0475: 1, H0386: 1, L0598: 1, H0529: 1, L0520: 1, L0762: 1, L0371: 1, L0638: 1, L0373: 1, L0646: 1, L0773: 1, L0521: 1, L0662: 1, L0805: 1, L0655: 1, L0517: 1, L0540: 1, L0542: 1, L0526: 1, L0809: 1, L0545: 1, L0791: 1, L0663: 1, L0665: 1, H0691: 1, H0547: 1, H0690: 1, H0435: 1, H0660: 1, H0651: 1, S0380: 1, S0406: 1, L0749: 1, L0780: 1, H0668: 1, H0653: 1, S0242: 1, S0276: 1, H0542: 1, H0422: 1 and H0506: 1.	L0803: 14, L0439: 9, L0752: 9, L0666: 7, L0659: 5, S0328: 5, L0756: 5, L0731: 5, L0794: 4, S0412: 4, S0360: 3, H0634: 3.	3786	251 - 361	1611 HOOIA57R HOOIA57

S0002: 3, L0805: 3,
L0809: 3, L0438: 3,
H0520: 3, L0748: 3,
L0740: 3, L0758: 3,
H0656: 2, S0418: 2,
S0358: 2, H0013: 2,
H0083: 2, S0022: 2,
S0386: 2, L0776: 2,
H0648: 2, L0602: 2,
H0521: 2, S0028: 2,
L0742: 2, L0596: 2,
H0423: 2, H0170: 1,
H0171: 1, H0657: 1,
H0341: 1, H0669: 1,
H0662: 1, H0638: 1,
S0420: 1, S0376: 1,
H0580: 1, S0007: 1,
S0132: 1, L0717: 1,
H0369: 1, H0600: 1,
H0587: 1, H0497: 1,
H0427: 1, L0021: 1,
H0575: 1, S0010: 1,
H0581: 1, H0421: 1,
H0263: 1, T0115: 1,
H0545: 1, L0471: 1,
S0051: 1, H0510: 1,
H0375: 1, S0003: 1,
H0328: 1, H0428: 1,
H0039: 1, H0622: 1,
L0483: 1, H0031: 1,

HOOIB34	HOOIB34R	1612	46 - 153	3787
HOOIB54	HOOIB54R	1613	2 - 199	3788

H0553: 1, H0644: 1, H0628: 1, H0673: 1, S0364: 1, H0316: 1, H0598: 1, H0090: 1, H0087: 1, H0551: 1, T0067: 1, H0488: 1, H0623: 1, H0494: 1, L0475: 1, H0560: 1, H0509: 1, S0150: 1, H0641: 1, S0422: 1, S0426: 1, H0529: 1, L0770: 1, L0761: 1, L0627: 1, L0646: 1, L0773: 1, L0521: 1, L0768: 1, L0766: 1, L0527: 1, L0647: 1, L0789: 1, L0663: 1, S0428: 1, S0374: 1, H0519: 1, H0435: 1, H0659: 1, H0672: 1, H0518: 1, H0522: 1, H0134: 1, L0356: 1, L0745: 1, L0747: 1, L0779: 1, L0759: 1, L0589: 1, L0592: 1, L0608: 1, L0594: 1, S0026: 1, H0136: 1 and S0242: 1.

HOOIF71	HOOIF71R	1614	3 - 389	3789	Ile-1 to Lys-7, Gly-13 to Lys-19, Pro-59 to Arg-76.	
HOOIG71	HOOIG71R	1615	2 - 301	3790		
HOOIK04	HOOIK04R	1616	2 - 172	3791	Val-50 to Arg-56.	
HOOIL33	HOOIL33R	1617	97 - 264	3792	Leu-41 to Ser-52.	
HOOIO53	HOOIO53R	1618	3 - 164	3793		
HOOIR94	HOOIR94R	1619	20 - 109	3794		
HOOJA64	HOOJA64R	1620	272 - 400	3795		
HOOJB36	HOOJB36R	1621	118 - 315	3796		
HOOJE93	HOOJE93R	1622	125 - 268	3797		
HOOIK91	HOOIK91R	1623	80 - 211	3798		
HOOIN84	HOOIN84R	1624	1 - 189	3799	Asp-48 to Thr-54, Glu-57 to Ser-63.	L0758: 14, L0747: 10, L0752: 10, L0731:-10, L0663: 9, H0547: 9, L0740: 9, L0666: 8, H0046: 7, S0126: 7, L0748: 7, H0539: 6, L0439: 6, L0759: 6, L0595: 6, H0543: 6, H0050: 5, H0031: 5, H0648: 5, S0328: 5, H0624: 4, H0657: 4, H0656: 4, S0007: 4, H0549: 4, H0550: 4, H0591: 4, H0616: 4, H0551: 4, L0769: 4, L0662: 4, L0659: 4, H0144: 4, L0438: 4,